DOCUMENT RESUME

ED 171 982 CE 021 362

TITLE	OICs [Opportunities Industrialization Centers] of America Final Report on the Vocational Education Research Project: Formative and Summative.
INSTITUTION	Gibboney (Richard A.) Associates, Inc., Kensington, Md.; Opportunities Industrialization Centers of America, Inc., Philadelphia, Pa.
SPONS AGENCY	Office of Education (DHEW), Washington, D.C.
BUREAU NO	498AH50318
PUB DATE	[76]
GRANT	G007500395
NOTE	106p.; Some pages in this document will not reproduce well due to broken type
EDRS PRICE	MF01/PC05 Plus Postage.
DESCRIPTORS	Attitude Tests; Change Strategies; Changing Attitudes; *Counselor Attitudes; *Counselors; *Culturally Disadvantaged; *Disadvantaged Youth; Industrial Arts Teachers; Industrial Education; Inservice Education; Learning Modules; Minority Groups; Reports; Research Projects; *Teacher Attitudes; Teacher Behavior; Vocational Education; *Vocational Education Teachers

ABSTRACT

As a result of the concern for minority and disadvantaged students' ability to relate the values and culture promulgated in schools to their own culture, a training program conducted in three school districts attempted to improve the attitudes and behaviors of teachers and counselors toward these students. A research study was conducted to (1) determine the impact of Opportunities Industrial Centers of America's treatment on the attitudes of teachers and counselors; (2) understand what type of attitudes a treatment of this type can effect; and (3) determine what underlying predisposition towards attitude change in teachers and counselors may affect the nature and magnitude of attitude change. Three instruments were used to pretest each group and posttest the group's attitude change. Findings indicate that the treatment program did produce the expected attitude changes in teachers and counselors. Three types of changes identified were in terms of content presented, the change orientation dimension, and concept values. The groups were not found to be different in respect to predisposition to change. (Teacher and counselor modules, a training session example, and survey instruments are appended.) (LRA)

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OICs OF AMERICA FINAL REPORT ON THE VOCATIONAL EDUCATION RESEARCH PROJECT: FORMATIVE AND SUMMATIVE

Grant No. G007500395
Project No. 498AH50318

OPPORTUNITIES INDUSTRIALIZATION CENTERS OF AMERICA INCORPORATED

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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Introduction

One of the basic problems for minority and disadvantaged students may be conceptualized in terms of a lack of congruence between the values and culture promulgated by the schools, and the life experiences of some of the students whom these same schools are charged with educating. The problem which these students, and thousands of others like them pose for education may be generally summarized as follows:

> How to meet the general education and world of work needs of people who come from backgrounds other than those represented in the dominant, middleclass institutions, which basically serve to further the values of the dominant culture.

The school's role in the important period from full-time student to full time worker is particularly important; not only because one's sense of personal worth is closely related to holding a satisfying job, but because the stability of our society depends to a large extent on people finding and maintaining employment. Although the availability of jobs is related to many factors beyone the control of schools, the latter must continue their efforts to improve programs directed at giving youth, unemployed or marginally employed adults the best possible chance of finding productive useful employment within the flux of changing social and economic conditions.

The Opportunities Industrialization Centers of America Vocational Education Research Project represents one educational approach which was developed and tested to improve the chances of minority and disadvantaged youth to become prepared for productive

and sttisfying work. The treatment approach was based upon the following premises:

- 0 Most disadvantaged minority students do not receive adequate information about the range of vocational choices available to them.
- 0 School administrators, Counselors and Instructors are not fully aware of the problems, aptitudes and potential of disadvantaged/minority group students, nor are they aware of the most effective strategies for dealing with the vocational problems of such students.
- 0 Parents in particular, and the community in general, are not aware of the needs of disadvantaged/minority group students, nor are they aware of effective strategies which they might use to help meet these needs.
- 0 Few schools have developed effective and comprehensive vocational programs which include guidance, counseling, placement and follow-through.

In order to remediate the aforementioned problems, OICs/A developed a conceptual programmatic framework which would provide in-service training to vocational school personnel in techniques and methodologies of meeting the needs and aspirations of minority and disadvantaged students. These techniques and methodologies ranged from modifications in vocational personnel's attitudes and perceptions to utilization of effective mechanisms. Though the primary emphasis of the treatment was geared to the minority/disadvantaged student population, many vocational school staff members found the methodologies and techniques to be useful in dealing with all of their students.

OICs/A believe (and the data support) that this study has far reaching implications and potential for schools throughout America. We also believe that the study should raise the interest of educators who are facing similar student populations described herein. We further believe that this project represents an

excellent opportunity to generate new research information as it pertains to teacher-training and attitudinal development among vocational program faculty members.

This document represents the Final Report reflective of the outcomes generated by this 18 month experiment. The study was conducted by Gibboney Associates, an external research group.

TABLE OF CONTENTS

DEVELOPMENTAL PHASE-STABILIZATION OF THE TREATMENT AND PILOT-TEST OF RESEARCH INSTRUMENTS. 1

A Brief Description of the Treatment. 1
CARLISLE AREA SCHOOL DISTRICT. 3
Background. 3
Population and Economic Characteristics. 4
The Schools. 5
CENTRAL MONTGOMERY COUNTY AREA TECHNICAL SCHOOL. 7
Background. 7
Population, Educational and Economic Characteristics. 8
GERMANTOWN. 11

Methods and Procedures. 13

SUMMATIVE RESEARCH PHASE. 17

Introduction. 17
A General Statement of the Purposes of the Treatment and of the Summative Research Phase 17
Review of Related Research. 17

Methods and Procedures. 23
Research Design. 23
Instrumentation. 24
Analysis. 27
The Context of the Research. 31
Description of the Treatment. 31
Scoring Procedures. 36
Analysis. 37

Findings. 42

Conclusions. 55

BIBLIOGRAPHY. 57

APPENDIX A: TEACHINER AND COUNSELOR MODULES. 59

APPENDIX B: EXAMPLE OF TRAINING SESSION 66

APPENDIX C: CONTENT SCALE -- TEACHER AND COUNSELOR VERSIONS . . 71

APPENDIX D: THE SEMANTIC DIFFERENTIAL CONCEPTS AND SCALES. . . 80

APPENDIX E: THE CHANGE ORIENTATION INSTRUMENT SUBSCALES. 85

APPENDIX F: TEACHER SCORING SHEET. 92

APPENDIX G: SEMANTIC DIFFERIENTIAL TRANSFORMATION SHEET. 96

DEVELOPMENTAL PHASE-STABILIZATION OF THE TREATMENT AND PILOT-TEST OF RESEARCH INSTRUMENTS

Since the main thrust of this report is to outline the important summative research to be undertaken during the Fall 1976 Semester, only the major evaluative conclusions related to the development of the treatment and its implementation in two complex field settings will be presented. This approach will be taken because the important outcomes of this effort are not those of a curriculum development project, but rather those of a vocational education research project which, hopefully, will add important knowledge to the body of research findings now being built up by the efforts of OE and state departments of education.

This section will deal with the following topics:

- o A brief description of the treatment
- o Demographic data on three field sites,
- o Methods and procedures used in the developmental phase

A Brief Description of the Treatment

The basic purpose of the treatment is to improve the skills and attitudes of teachers and counselors so that more minority and economically disadvantaged students may profit from appropriate vocational education experiences. The assumption underlying the basic purpose is that, given the documentation of the middle-class bias of the school by Michael Katz, Maxine Greene and many others, school personnel may need further training more properly to perceive the potential of students from other than middle-class homes and communities. To the extent that language and some culturally-related behavior patterns (neutral in themselves) are misperceived by school people to this extent, then, members of some groups may not have access to free public education.

The treatment was developed during the early months of the project by the Opportunities Industrialization Centers of America (OICs/A) based on their extensive experience in retraining the unemployed from diverse cultural and age backgrounds. OICs/A, with headquarters in Philadelphia, has more than 100 local affiliates in the U.S.

OICs/A education staff developed forty training modules for the teachers and counselors participating in this project. Administrators who attended the sessions, sat in with either the teachers or the counselors as they wished. These modules represent a modified version of OICs/A experience in developing comprehensive training systems for the unemployed.

Each module has several key components: a rationale on the need for the particular content of the module; objectives; material needed (including audio-visual materials); methods to be used; a bibliography; and important time limitations, if appropriate, on basic components of the module. The titles of the forty modules are given in Appendix A.

Each module provides a guide for OICs/A education staff leading the training session. A module is typically 25 pages in length and provides a useful resource for the staff trainers. Each module attempts to provide carefully selected content through a varied range of methodologies and support materials to sharpen the modular content and to sustain interest. For example, role playing, summary content charts, films, and discussion techniques are used more frequently and deliberately than they are typically used in college or high school classrooms.

The OICs/A training staff consists of a project director and five other staff members with primary expertise and experience in the fields of teacher training, counseling and project development.

The number of participants in each session was ten teachers and seven counselors in the Carlisle School District (CASD) and thirty-four teachers and seven counselors in the Central Montgomery County Area Technical School (CMATS). Each session was one hour in length.

The treatment during the formative phase was given during the months of January through June 1976 for CASD and CMCATS. The percentage of those enrolled attending all of the sessions was 81% for CASD and 90% for CMCATS. Participantion was voluntary for the CASD site only.

Since the training session content and methods changed throughout the course of the treatment in response to evaluation feedback, a generalized description of the latter training sessions is given below.

The sessions opened with a warm-up exercise to ease the transition for the participants after a day of teaching or counseling. These activities were light and usually fun for the participants. Although they varied and utilized many modes, most often observed were pencil and paper activities (for example: picking three out of twenty miracles that you have just been offered - immortality, some talent such as singing, millions of dollars, sex appeal, vast knowledge and high I.Q., etc.) The activities allowed the individuals to get a feeling for their own value structure and priorities.

After the warm-up exercise the content of the module was introduced. This content was new material which built on previous sessions or expanded earlier ideas. Presentations were usually made by lecture supplemented by flip charts which illustrated figures and graphs or emphasized the points being presented. In addition, over head slides, 35mm slides and films were used. In preparing for these presentations, the staff assembled relevant audio visual aids. The content of the presentations, as well as that of the visual aids, were varied and/or modified to respond to the needs expressed by the different groups at the two schools.

The session usually ended with a wrap-up activity. This activity generally took a form that allowed the participants to apply the ideas discussed in that session. Since many of the sessions built on each other, the wrap-up activity was used to solidify the content of the session and to lay the groundwork for the sessions to follow.

Wrap-up activities took the form of discussions, questions to be answered individually followed by discussion, or written work to be turned in so that the leaders could be aware of the problems and concerns of the participants.

Periodically the participants were asked to complete an evaluation form which the staff used for feedback on their presentations.

The interactions between the participants and the leader and among the participants became more relaxed as the sessions progressed. In the last half of the treatment period much more use was made of specific concerns and problems that the participants brought to the sessions. The content of the sessions frequently revolved around case studies supplied by the participants themselves.

See Appendix B for an example of a single training session.

Summary Demographic Descriptions for the Two Sites in the VERP Study (Vocational Education Research Project)

Three extensive demographic profiles were made by the research staff of the two sites mentioned earlier and of the third site, the Germantown section of Philadelphia.[1] The studies were made for the purpose of describing more fully the subtle community cultural factors which influence any educational change or research effort and for the purpose of more precisely constructing scientific control or comparison groups for the summative research phase.

In its demographic assessments of school districts, the Educational Quality Assessment Division of the Pennsylvania Department of Education concentrates on the population factors of racial proportion and educational achievement and on economic factors of income, employment, and occupational levels. Unfortunately, E.Q.A. demographic studies were not available for the VERP sites at the time of this study, but these variables, regarded as central by that division, will serve as the central ones here. The following sources were consulted: The U.S. Bureau of the Census; the Pennsylvania Department of Education Division of Field Studies and Educational Statistics, and Bureau of Vocational Education; the tri-County Regional Planning Commission; the Montgomery County Planning Commission; the Philadelphia School Board Office of Administrative Research; Mr. Wesley James, Director of Pupil-Personnel Services for CASD; several other officials in the State Department of Education; and other publications as noted.

CARLISLE AREA SCHOOL DISTRICT

Background

The Carlisle Area School District is composed of four municipalities located within Cumberland County. There are two boroughs, Carlisle and Mount Holly Springs, and two townships, Dickinson and North Middleton. These areas actually represent three distinct geographic sections, since only Carlisle Borough and North Middleton Township are contiguous.

[1] Dansky, Howard, "Demographic Study of Sites in the Vocational Education Research Project," Richard A. Gibboney Associates, Inc. mimeographed, 35 pp., 1976.

Both Dickinson and North Middleton Townships were settled by Scotch-Irish in the seventeen-hundreds. Neither has developed the industrial base which has characterized the two boroughs. Dickinson in particular has remained quite rural. It has today the smallest population and the largest land area of the four municipalities.

Population and Economic Characteristics

The majority of the district's residents live in Carlisle Brough -- slightly over three fifths. Ninety-two percent of the Blacks in the district also live in Carlisle, primarily in the central and northern sections of the town. An influx of 93 Vietnamese from the Indiantown Gap refugee center has slightly altered the racial proportions represented in the population tables.* The tables clearly show that Carlisle has the greatest population density of the four municipalities, followed by Mount Holly, North Middleton, and Dickinson. A large part of the economic base of the area consists of substantial numbers of operatives, craftsmen, and foremen, particularly in central and northern Carlisle and in North Middleton. A report of the Pennsylvania Department of Internal Affairs in 1965 indicated that there were 52 manufacturing industries in the district employing 6,156 workers in various capacities. Diverse in nature, these industries are led in size by a maker of tufted carpets and rugs, followed by manufacturers of women's and children's clothing, tires, footwear, wiring devices and electronic components, steel castings, and paper products.

Carlisle's economy also stands on its high number of professionals and technical workers compared to communities of similar size. In fact, the labor force in the sourther sector has almost one-third of its number in this category, and it contains a high proportion of managers and administrators as well. This is in substantial part due to the presence of Dickinson College in the town. Relative to other msall towns, Carlisle also features a high proportion of clerical workers which signifies a prospering business sector. Agriculture has had a steadily declining importance in the Carlisle area. The entire district labor force contains only one percent farm workers -- Carlisle iteself has half that percentage. Farmed land has been decreasing in area for over twenty years.

In general, these occupational factors contribute to long-term residential and economic stability. Another factor which reflects on community stability is the housing pattern. Communities with more low-income families tend to have a greater turnover in population, and housing trends run to more rentals and apartments. This factor can be particularly telling in a non-metropolitan setting. Rural North Middleton, Dickinson, and Mount Holly have a consistently high percentage of housing units owned rather than rented. Carlisle itself contains one particular central area (Tract 122) which has only one quarter of its housing occupied by the owner; while the central tracts beside it (123 & 124) have over one-half owner-occupied housing, they too have less established neighborhoods and much lower incomes than the northern and southern sectors, which have two-thirds owner-occupied housing, and, therefore, more stable neighborhoods. Census data also show property values in the central areas to be about half or less than half of those in the north and south tracts.

* No tabular demographic data will be presented in this report.

Carlisle, then, seems to be composed of three zones of populations. The central zone has the lowest incomes and educational levels, the highest percentages of laborers, service workers, and lower echelon operatives as well as families with female heads of family. The population tables consistently show a correlation between urbanization and percentage of female heads of family. Population centers seem to contain a higher percentage of such families, i.e., with female heads, for several reasons: such families tends to have lower incomes with higher unemployment rates, creating a need for the less expensive high-density housing and cheaper public services more available in more concentrated population centers: other limitations on such families, such as decreased mobility for the parent, make the more accessible services and institutions of the town more congenial to daily living. In general, then, the presence of such families in higher numbers (14 or more percent appearing to be the highest level, with 6 percent on the low end) demonstrates the existence of an urban-style concentration of facilities and/or a lower income population dependent on that network of facilities. In Carlisle, the three central tracts have a combined percentage of 16.5, while the outer tracts have only 10.5 percent.

In the northern zone, reside more skilled operatives and sales workers; residents have higher incomes and educational levels than in the central zone. Those in the southern zone are primarily white collar workers with substantially higher incomes and educational levels than those in the northern zone. As noted earlier, almost a third are in the professional and technical fields.

Despite some enclaves of relatively lower socio-economic levels, all areas of the district are in good economic health -- certainly they were at the time the data were collected. Mount Holly and Dickinson are behind the rest of the district in educational levels, and Dickinson which lacks not only the educational foundation, but also the access to the industries which account for the bulk of the prosperity of the middle class of the district as a whole, also falls behind in income levels. Although the standard of living, reflected in income figures, is the lowest of the three sites, the overall unemployment rate of 2.9 percent compares quite favorably with the 1970 rate for Middle Atlantic states and Pennsylvania, both 4.5 percent as given by the Bureau of Labor Statistics for that year. The national rate, incidentally, was 4.9 percent. Additionally, even the tracts with lowest mean income exceeded the national average. The level of educational attainment is the lowest of all three sites, southern Carlisle being the only anomalous section with seventy percent high school graduates and 12.7 median school years completed. This, however, has grown out of the basically rural-blue collar nature of the population, a character maintained in the area since the first forges and mills were built in the eighteenth centruy as the foundation on which subsequent generations have built a vital and growing community.

The Schools

Since VERP focuses on vocational education, that must also be the scope of this report as it relates to school data. Additional data will be used to elucidate the context through which the students have

come on their way to vocational education, and to provide a fuller picture of the students' and community's attitudes and goals in the realm of education.

Vocational education is not a novelty in Carlisle. The Carlisle Area School District first implemented vocational programs over twenty-five years ago. At the outset, it was founded largely on agriculture, an area of curriculum which has since become irrelevant to the needs of the area. Likely it also developed as a small community's way of breeding its own labor force, since it lacked the flow of rural immigrants a larger city would have had to work in its diversified light industries. The CASD vocational component has such a well-established history, in fact, that it alone continued to receive state underwriting after the opening of the Cumberland-Perry Technical School while others did not.

More recently, Carlisle's graduates have increasingly been responding to the larger society's demand for higher education. Whereas forty percent of the graduates in 1964 applied to degree-granting institutions, more than forty-seven percent of the Class of '74 did the same. Enrollment itself declined since the 1970-71 school year from a baby-boom high of 6629 to 6385 in 1973-74, according to school district figures contained in the 1974 update of Long Range Plans. Tables S1 and S2 give October 1974 enrollment figures for vocational students and for all high school students in the VERP sites. Overall enrollment in Carlisle is expected to remain fairly stable at 6400-6500 into the mid-1980's, according to district projections. Analysis of racial statistics in the lower grades reveals the potential for a slight increase in the proportion of non-white students in the future, but no dramatic changes appear likely. September, 1974 enrollment figures show 5.9 percent non-white students. Poverty pupils, as defined by government funding procedures, have been an increasing factor in Carlisle's enrollment as well as its funding. In 1974-75, 527, approximately eight percent, were poverty pupils, according to the Basic Instructional Subsidy Report of September 15, 1975. The four year increase was from 384 in 1969-70 to 527 in 1973-74. The trend over time and a comparison with other districts are seen in the graph labelled "Poverty Pupils". (Data for Germantown were not available.) Apparently the poverty factor has stablized at this point. With regard to funding in general, Carlisle's expenditure per student in 1973-74 was greater than that of sixty percent of state school districts, though it was substantially lower than the other districts in the VERP, a measure primarily of its income and real estate base relative to the others. While Carlisle ranked 206 out of 550 on this dimension, the other four districts were in the top sixty. Carlisle's schools are supported by a high proportion of taxes other than real estate taxes. An illustrative comparison shows Carlisle having forty percent of the total market value of real estate of Upper Merion School District, though their populations are about the same. The rate of tax on real estate is also lower in Carlisle than in CMCATS, but it is the same rate as Philadelphia uses. This information is published in the Pennsylvania Department of Education "A Measure of Local Effort 1974-75".

What input does the community have in the schools in addition to supplying the funding, the staff, and the students? Two groups, the Trade and Industrial Advisory Group and the Business Advisory Group, were established. In fact, says a local school source, the former meets only once or twice yearly and the latter not at all. Little or no structured community involvement actually enters into the regular functioning of the school system. The community trusts the school district administration to carry on its professional business. The administrators and staff have been doing just that.

CENTRAL MONTGOMERY COUNTY AREA TECHNICAL SCHOOL

Background

Montogmery County is part of the metropolitan area of Philadelphia. The economy of the county and the composition of its population are intertwined with prevailing trends and conditions in Philadelphia. For example, as Philadelphia was losing population during the last decade, Montgomery County was gaining -- 1970's census counted a twenty percent increase over 1960. Additionally, over twenty percent of employed people in the county work in Philadelphia. On the other hand, three times that many county residents work inside the county. Thus contrary to the impression given by traffic jams, the commuter-clogged Schuylkill Expressway is not really the county's umbilicus, but rather just a primary artery running between the two areas.

The set of municipalities which comprise the central portion of Montgomery County are a complex suburban mixture of poor and rich, dense and diffuse, and blue and white collar populations. The Schuylkill River curls through the heart of the area, as all but one of the municipalities has a border on the river. Looking at the map, one sees four boroughs hugging the two wide bends in the river, while the townships, their larger tracts reflecting a sparser population, have their large masses spread out into rural lands. (In fact, almost one-fifth of the county in its entirety is actually classified as rural.) These boroughs -- Conshohocken, West Conshohocken, Bridgeport, and Norristown, and these townships -- Whitemarsh, Plymouth, Upper Merion, East and West Norriton, together form the area from which are drawn the students enrolled in CMCATS. Three school districts provide the basic public education. They are: Norristown Area School District (NASD), including Norristown and East and West Norriton; Colonial School District (COLSD), including Conshohocken, Plymouth, and Whitemarsh; and Upper Merion School District, including Bridgeport, West Conshohocken, and Upper Merion. Apparently, these combinations of boroughs and townships came about in the late 1950's as a response to state mandates requiring school districts to increase their size to maintain funding. Certainly, as it was intended, these reorganizations have helped to upgrade education for children of the boroughs, where the tax base was much lower. Another important effect

has been the bringing together of different socio-economic, ethnic, and racial backgrounds. The schools have at times found this a volatile mixture, and so they continue to seek ways to increase communication and understanding among all those in the communities they serve.

Population, Educational, and Economic Characteristics

In terms of socio-economic, racial, educational, and density factors, the CMCATS site does appear to be composed of two distinct strata, one geographically situated in the townships and the other in the boroughs. As mentioned in the background section above, these two population groups are mixed within each school district to produce the broadly representative population enrolled in the schools of each district. To discuss the demographic nature of the CMCATS students and their home communities as a whole, however, one need not orient the analysis strictly to individual school district characteristics. Although organized by school district, the examination here will focus primarily on municipal divisions as reference points. It should be pointed out that the districts do not contribute equal numbers of students to the vocational school -- roughly two-fifth of the enrollment coming from COLSD, two-fifths from NASD, and one-fifth from UMSD. Lower Merion is not included in this report due to its very minimal participation. In any case, whatever may be the demographic influences which the students carry into the vocational school, the relative strengths of those influences are in part represented in that 2-2-1 ratio of student enrollments.

A look at the data in the tables substantiates the presence of two distinct demographic strata. Ranking the municipalities according to occupational levels, income, and education, one finds Whitemarsh and Upper Merion at the head. East and West Norriton and Plymouth falling in slightly below. The four boroughs trail the townships by wide margins. For example, Whitemarsh and Upper Merion residents have mean family incomes of $18,100 and $15,100 respectively; forty percent or more are employed in professional or managerial occupations; and more than seventy-five percent of adults over 25 years have graduated from high school. By contrast, borough family incomes average $10,400 - $11,000; 12 - 15 percent of borough residents are employed in those upper level occupations; and less than forty-five percent of adults over 25 years have graduated from high school. One other illuminating feature of this broad-based demographic dichotomy is the concentration of Blacks in two of the boroughs, i.e. Norristown and Conshohocken, with 16.6 and 6.0 percent respectively.

A closer examination of municipalities ought to begin with Norristown, since it is the county seat at the geographical heart of the CMCATS ares, and it is the home of the vocational school itself. The largest borough in the entire county, Norristown, claims an area of 6.1 square miles, an area comparable to that of the other three boroughs in the CMCATS site combined, yet its population is more than double their combined total. As a further illustration of its high density, Norristown, which could fit into a fractional part of either Whitemarsh or Plymouth Township, houses more people than those two areas together. It dominates its school district as do none of the other boroughs in the site as it comprises two-thirds of the district's overall population. It also

contains over eighty percent of the Black population living in the entire site area. Another indicator of urbanization, discussed as such in the section on Carlisle, the percentage of families with female heads in Norristown is at the high end of the scale at about fifteen percent. In this case, the high percentage reflects socio-economic influences as well as concentration of supportive facilities. For example, Norristown has the highest proportion of laborers and service workers in the area. Employment levels in the top white-collar occupations are half those of East and West Norriton.

The number of poverty pupils reveals a sharp increase in the NASD. In 1974, 1618 were in that category, about 17 percent of the district pupils. This has become such a significant factor that state funding was increased in 1974 to $195 per poverty pupil, while the other districts included in the graph receive $165 per poverty pupil. Although the overall population of Norristown itself has been declining in the last five years by count of the Montgomery County Planning Commission, the non-white enrollment from 20.3 percent in 1967 to 25.5 percent in 1974, a 25 percent increase. Ninety-five percent of the non-whites are Black students, whose families generally occupy the lowest socio-economic stratum, as illustrated in the table on characteristics of Black populations. While all the figures on that table are consistent in reflecting that socio-economic standing, several striking features deserve mention: fully a fifth of the families have female heads; no doubt the same social and economic pressures active in that feature have created the anomalous unemployment configuration represented by the fact that twice as many men are unemployed as women; forty-three percent are in occupations of a generally menial nature; laborers, service workers, and private household workers.

Seven-eighths of all workers in Norristown work within the county, many within the school district boundaries. Manufacturing industries lead in persons employed, followed by retail and wholesale trade, professional and educational situations, hospital workers, construction-related businesses, transportation and utilities, and miscellaneous others. Manufacturing industries include metal-working and non-electric light machinery, food and dairy products, textile and apparel manufacture, and other light industries. The textile industry apparently is on the wane, however, as the industry on the whole has been shifting its center more and more to the South in recent years, according to an industry source. The high number of hospital workers is due to the presence of Norristown State Hospital, which employs many service workers and a high percentage of Blacks. In any case, Norristown's overall need for vocational education for its young people appears in relief after examination of its present labor force characteristics -- and NASD enrollment in CMCATS has doubled since 1967 in response. The Norritons, with half the percentage of unskilled labor and twice the professional and managerial ratio, have less demanding pressure for increased vocational development. Even there, however, one-third are blue-collar in craftsmen-foremen and operative categories. Certainly children are not limited to their parents' occupational choices, but in NASD the orientation to post-secondary education is lower than all the VERP schools except Germantown, as follow-up studies show 47.1 percent of 1974 graduates having applied to degree-granting institutions, whereas the percentages in UMSD and COLSD are 56.2 and 56.8 respectively. Thus for NASD students CMCATS provides a rung on the career development ladder which had been sorely missed in the past.

With several remarkable differences, the demographic relationships in the other two school districts parallel those in NASD. As stated above, students in COLSD and UMSD have a greater orientation toward post-secondary education than those in NASD. Like NASD, both have pockets of primarily blue-collar employment. Conshohocken and Bridgeport-West Conshohocken areas have over sixty percent of their labor force in those occupations. Plymouth as well has over forty percent, while Upper Merion and Whitemarsh are predominantly white-collar residential areas with many professionals and executives employed in Philadelphia. Conshohocken has a substantial Black population, which, like Norristown's tends to occupy the lowest socio-economic level. Bridgeport-West Conshohocken has very few non-white residents, [illegible]s about the same occupational breakdown as Conshohocken with a somewhat higher mean family income. Like Norristown, these boroughs have been declining in population, and, also like Norristown reinforce the picture of more transient urban communities with less stable neighborhoods than those of the surrounding townships. The townships, meanwhile, are growing at a stabilized rate after a period of tremendous growth in the Sixties. Overall, distributions of industrial and business enterprises in COLSD and UMSD are similar to NASD, with manufacturing, wholesale and retail trade, and professional services at the head of the list. Many West Conshohocken foremen and operatives earn thier livelihoods in heavy industry, with a substantial steel-producing plant in the area.

Economically, then, the entire CMCATS area appears strong within a context of blue-collar - white-collar variation and concomitant income spreads. Unemployment is not a significant factor compared to state and national norms, although Norristown displays potential for difficulty in that regard. Ethnically, the area certainly has a diverse and interesting mix of cultural minorities. For example, Norristown has a large Italian community. As was stated in the introduction, however, only Blacks as a minority are discussed comprehensively in the sources consulted, and resort to sources knowledgeable about the ethnic populations would have gone beyond the scope of this research.

With regard to the relative vocational education needs of the students in the three districts, several measures appear relevant. Already noted above, the ratio of enrollments in CMCATS is one measure. NASD's particular ripeness for secondary vocational-technical training has been discussed in some depth. Using another measure, which appears reflective of training outcomes, 1974 follow-up studies show that almost ten percent of Plymouth-Whitemarsh graduates of 1974 entered jobs as semi-skilled operatives or skilled crafts workers. Among all the high school graduates from the VERP school districts, only Carlisle's compared to those of Plymouth-Whitemarsh with respect to the number entering vocations at that level. Thus, COLSD's judgment in participating in CMCATS on a broad scale has been rewarded with tangible student outcomes of substantial proportions. Lower employment levels in comparable vocational positions for NASD and UMSD graduates may indicate that CMCATS administrators and other policy-makers have to hone more finely their responses to particular student needs and aspirations in order to produce lasting career results for more students.

Germantown High School draws from the northwestern part of Philadelphia. The area is in fact the upper part of District Six of the School District of Philadelphia. At times, certain data collected on the other schools involved in VERP has not been available on Germantown, since information specific to it is often buried in figures for the entire Philadelphia school system. At any rate, the GHS area extends northwest from southern Germantown to the far end of Chestnut Hill, and northeast from the Wissahickon Creek to Cheltenham Avenue, which is the common border with Cheltenham Township of Montgomery County. Part of a city of almost two million inhabitants. Historically, Germantown has metamorphized from an all-white district into one of the most racially balanced sections of the city -- the population table reflects that fact.

Geographically, the GHS population can be broken down into sections including Germantown, Mt. Airy, West Oak Lane, part of East Oak Lane, and Chestnut Hill. A more useful breakdown, however, in light of the educational orientation herein maintained, consists of the catchment areas outlined on the map provided of the seven secondary schools which feed into the high school: Jenks, Wagner, Roosevelt, Henry, Houston, Pickett, and Leeds. The first one, Jenks, while it is technically one of the feeder schools, turns out in actuality to contribute very few students to GHS; less than thirteen percent of the high school age students in the Jenks area attend public school, and of those, a good portion attend other public schools than GHS.

The issue of non-public school attendance is relevant to the entire site. It is much more of a factor here than in the other two VERP sites. High school age youths attending non-public schools from the Houston drawing area are about 50 percent of all attenders; from Pickett, 32 percent; from Wagner, 29 percent; from Henry, 25 percent; from Roosevelt, 23 percent; and from Leeds, about 20 percent.

Another factor determining the attending population of GHS is that academic public schools draw a substantial portion of the college preparatory students, who compete for admission to those schools. There are two such "academic senior highs". Another building in the district with limited admission accepts students who are unable to qualify for the "academic" experience. GHS, then, is left as an open admission school, obliged to accept all students who wish to attend.

Socio-economically, the Germantown area compares favorably with the rest of the city. The Black population therein compares even more favorably with the Black population of the city as a whole. The median family income for the GHS site was $10,553; that of Philadelphia as a whole, $9,366. In the tracts where the Black population was 400 or more in the GHS area, Black median family income was about $10,150; the analogous figure for the city Black population was $7,379. A high proportion of the white population in Germantown is in professional or managerial occupations, many college and school teachers among them. About 34 percent of the white labor force are in these fields, while the Black labor force has half that percentage in those occupational areas, still high relative to other Philadelphia non-whites. Educational achievement in the GHS population overall is marked by 11.9 median school years completed by adults, with 54.3 percent high school graduates. Philadelphia overall had 10.9 median years completed and only 39.9 percent graduates. A comparison of GHS Blacks

and the city Black population overall shows the former with figures of 11.8 years and 50.6 percent graduates, and the latter with 10.4 years and 32.5 percent graduates.

It is worth noting that these relatively high GHS socio-economic levels are not evenly distributed throughout the GHS district. The three northern catchments -- Houston, Henry, and Leeds -- are distinguished from the southern three by their higher educational, income, and occupational standards. Property values in the two sectors diverge along the same lines in general. Pickett and Roosevelt are particularly distinct in that regard with average property values under $9,000 compared to the others which are all between $11,500 and $15,400.

Since there is such a large non-public school factor, it is worthwhile to probe some characterisitics distinguishing the public school families from the non-public school families. According to information provided by the Philadelphia School Board Office of Administrative Research, public school family median incomes were $10,266 with 11.7 percent below the federal poverty line; non-public school family incomes were $11,296 with 6.9 percent below the federal poverty line; families with no school-children had median incomes of $10,426 with only 4.8 percent below the poverty line. There was a 5:3:2 ratio among those three groups in the number of families receiving public assistance. These data were compiled from the 1970 census, it should be noted, but are proffered here with a caution -- reflecting more the spirit than the letter of reality.

In general, then, the demographic patterns of the GHS site demonstrate a general migration of a large segment of the more mobile Black families in a northwesterly direction. One can see that these Black families, which in Germantown -- as in the other VERP sites -- tend toward the lower end of the socio-economic spectrum among the total population of their locality, are the ones whose children depend on GHS for high school education. Over ninety-eight percent of the students are Black. Given the filtering out of "academic" students mentioned earlier, it is no surprise to find that a relatively low 39.3 percent of 1974 graduates applied to degree-granting institutions. The same follow-up study shows that 47 of those graduates out of 878 had found jobs in semi-skilled and skilled vocations as of October, 1974. As with the other schools in VERP, clerical workers found the most jobs among those graduates. Germantown's students do seem to be reaping benefits from their vocational training opportunities. In the context of the particular characteristics of those actually attending the school, and notwithstanding the need for social changes of a broader nature, vocational education can help provide a more hopeful future for those young people.

The demographic data from both rural and suburban sites support some common-place conclusions about our society: usually minority groups earn less, have fewer mean years of schooling, are concentrated in the "downtown" areas of our communities, and have more female heads of households.

One indicator that may be more fresh is the apparent differential effect of the area vocational school on after-high school job placement in some occupations for students from socio-economically comparable districts. For example, Plymouth-Whitemarsh and Upper Merion are reasonably comparable suburban districts (on median family income for example) served by the Central Montgomery County Area Technical School. One district's graduates (almost 10 percent) entered jobs as semi-skilled operatives or skilled craft workers according to 1974 follow-up studies; the other district had lower employment levels in these occupations (exact percentages not available). What might account for this effect? It would be interesting to know if area vocational schools produce differential effects on students from comparable communities, to what extent these effects are within the powers of educators to influence, and to what extent these effects may be desirable or undesirable.

Certainly no conclusions or judgments can be drawn or the basis of data presented here. Incongruities in data are noted on the chance that the incongruity may, on closer examination, reveal something more substantial.

Methods and Procedures

The developmental period for testing and stabilizing the treatment occurred between January 15 and June 15, 1976 at two sites -- Carlisle Area Senior High School and the Central Montgomery County Area Technical School. The training modules, twenty each for teachers and counselors, were written by OICs/A. The first modules were completed by early February; others were completed subsequently with revisions continuing through June, 1976.

The primary methods used by the evaluators were observations of the training sessions and interviews of the participants. The recommendations based on the observations and interview data were fed back to the training staff so that the training session content and methods could be adapted to better meet the perceived needs of the participants. Internal feedback from OICs/A administrative staff provided additional information to promote such change.

The evaluators also developed and tested two Likert-type instruments to measure attitude change of teachers and counselors. (See Appendix B for copies of these instruments and Section II of this report for the use of these instruments in the summative research phase).

The basic ideas related to the training sessions which emerge from observations, interviews, and informal talks with the participants are given below.

On the positive side the teachers and counselors from the two sites see the presentations as well-planned, the leaders well-prepared and knowledgeable in their areas of presentation, the logistics and audio visuals

integrated smoothly within the training sessions, and OICs/A as an organization with extensive experience and commitment to helping the economically disadvantaged.

An important observation noted was that despite initial feelings of suspicion by the mostly white, rural or suburban, teachers and counselors towards the urban black trainers, the participants became relaxed and open towards the training after a few sessions. This finding speaks well for both the trainers and the trainees.

All of the suggestions for improvement relate to providing more discussion time, providing more time for the participants to raise local problems pertinent to the session content, and to retaining the basic structure of the training modules while building in enough flexibility to accommodate unique local needs. Some of the participants suggested other steps prior to the training sessions which would help to "tune" the trainers in to local conditions. These suggestions included informal observations of teachers' classrooms so that the trainers could see the students and teachers first-hand in local settings and having lunch with the trainers from time-to-time to build personal contacts outside the more structured training sessions.

The training sessions were subsequently modified to encourage much more participant discussion and to adapt the training content to the problems faced by the participants. These modifications based on evaluation feedback were received easily by the trainers. The modifications also avoided the pitfall faced by many inservice programs in that the preplanned content becomes a security crutch to the trainers making any major change in content or structure very difficult.

The May 1976 interviews reinforced two educational cliches: "start where your students are" and "motivate your students by building on their present interest." These basic ideas in teaching have been cliches not because their substance is untrue, but because they are talked about more than practiced.

Participants reflected recognition of these ideas in supporting the changes of the training staff in adapting method and content to the concerns of participants. Typical participant comments are given below.

"The OIC people are trying to find out about our problems now. I wish they had done this earlier."

"They (training staff) are getting us to talk about how we would solve the problems presented in the sessions."

"They should have asked us what we needed help with before we started."

"OIC staff is now more relaxed and better informed on our school situation."

Underlying these comments is a fundamental curriculum-instructional problem which is impossible to solve in a universal sense: How much of a curriculum (training modules here) should be prepared in advance and how much should be developed as the teacher and students proceed from one lesson to another? Without some advance preparation teaching can degenerate to the teacher's beginning every lesson with "What would you like to learn about today?" This approach can very easily avoid cumulative learning experiences which enlarge insights and motivate a desire for furtherlearning.

A practical approach to this problem might be to have in advance a general outline of content, reference lists, carefully selected films etc. which would be useful in studying one area - such as vocational education and economically disadvantaged youth. Early sessions could be devoted to three objectives; 1) establishing rapport between the leaders and the group by 2) conducting an informal census of problems faced by the inservice participants and 3) relating selected problems for this list to the content and materials prepared in advance, noting gaps, and, while beginning with lessons prepared in advance, simultaneously developing new content and materials to meet the problems of concern to particular groups of participants. This approach requires some flexibility from the training staff in developing or adapting curriculum materials, but this effort exacts far less energy than forcing an irrelevant "treatment" on a group and coming once again to the "no significant difference" finding typical of too many poorly designed treatments and expertly developed research designs. The OICs/A staff has been able to follow this practical approach to a large degree. They overcame participants initial wariness by establishing rapport via discussing with them their self-perceived problems They used the prepared modules as guides for the sessions, modifying them as necessary. Throughout the sessions the staff continued to elicit feedback from the participants, showing flexibility and sensitivity to their needs.

The results of the pilot test administration of the two attitude instruments are presented below. These were 27 items in the teachers' instrument and 25 items in the counselors' instrument. Respondents were to read the item and choose one of the following statements:

SA Strongly Agree
A Agree
NO No Opinion
D Disagree
SD Strongly Disagree

The items were so worded that a SA choice reflected most congruence with the training session content, A reflected the next level of congruence with session content and so on to the SD which reflected least congruence. Each response was arbitrarily given a weight of 1 to SA, 2 for A, 3 for NO and so on to 5 for SD. Thus the lower the item score or the total mean score across items the more the group agreed with the content of the training sessions; low scores are interpreted to reflect desirable attitude changes.

Since instruments were developed in July and August no pretest was given. The main purpose of the administration was to pilot-test the instrument for the Fall summative research. The item analysis and data on these other instruments are presented in the next section. (Summative Research Phase)

Figure 1

Mean Total Scores on the Teacher and Counselor Attitude Instrument for Two Sites and One Comparison Group

	Group	N	% Return	Mean Total Score
Teachers	CMCATS	12	35	72.44
	CSHS	10	100	74.33
	CSHS COMP. GRP.	8	100	78.25
Counselors	CMCATS	5	71	58.33
	CSHS	5	71	60.60

Instruments mailed August 20, 1976

Since the lower score is the more desirable score, and since the instruments were not available early in the project for a pretest, the only cautious observation that might be made relates to the CSHS Comparison Group and the CSHS treatment group. These limited data (including the small numbers) at least go in the direction of predicted change; that is, the treatment group's lower score relative to its comparison group (non-participating teachers in the same school) indicates that its attitudes at the time of measurement were closer to the training session content than were the attitudes of the non-treatment group. On a clinical, if not scientific basis, one could say that this difference in favor of the treatment group may indicate a treatment effect subject to confirmation through a pre-post analysis of scores on larger treatment and comparison groups during the final summative phase.

These differences were not statistically significant when tested by analysis of variance and a t-test.

SUMMATIVE RESEARCH PHASE

Introduction

A General Statement of the Purposes of the Treatment and of the Summative Research Phase

As discussed more fully in the rationale of the Vocational Education Research Project in Section I, the OIC/A treatment/training sessions with teachers and counselors are designed to make direct impact upon their attitudes and indirect impact upon their behaviors towards minority group and disadvantaged students. The OIC/A treatment ought to influence attitudes towards a greater understanding of the needs, potentials, and skills of minority group and disadvantaged students; towards a more positive view of the role that vocational education can play in the lives of these students; and towards the adoption of new or different teaching/counseling practices which may be more effective in dealing with the special vocational problems of these students.

The major purpose of the summative research period is to determine the impact of OIC/A's treatment on the attitudes of teachers and counselors and to understand the nature of that impact. Thus, of concern is not only the evaluative question of whether or not attitudes were positively affected, but also the research questions of what types of attitudes can the treatment effect and what underlying predispositions towards attitude change in teachers and counselors may account for some of the changes?

Review of Related Research

There have been several research and evaluation studies which addressed the problem of the attitudes of vocation education personnel and academic teachers towards vocational education and minority/disadvantaged students. While the studies cited here are not exhaustive of the literature, they illustrate the various methodologies used to determine some of the factors underlying the attitude change processes in the current study.

Dawson et al[2] studied the effects of an inservice training institute upon thirty vocational education teachers and supervisors designed to enahce their understanding of disadvantaged and handicapped students. Three instruments of a pre- and post-test battery were given to measure the effects of the three week treatment of presentations and small group discussions. The three instruments were: 1) the Perceptual Awareness Inventory designed to measure participants self-determined knowledge of working with disadvantaged/handicapped students; 2) a cognitive

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[2] Dawson, James I. Inservice Re-Training of Vocational Education Personnel to Amplify and Enhance Their Role in Working with Disadvantaged and Handicapped Learners: Final Report, July 1971, ERIC ED 863477

multiple choice test to measure the participants' information gain regarding the training content; 3) a semantic differential with ten concepts[3] to be judged on twelve bipolar adjective scales designed to assess participants attitude change towards teaching the disadvantaged/handicapped. A fourth instrument, a rating scale, was used to assess the participants' judgments of the institute's presentations and processes.

The analysis of the instruments' data on the pre test and post test measures showed that while there was assimilation of the training content, there was no significant change in attitude. The perceptual awareness and cognitive instruments showed significant pre-post differences, but the semantic differential did not. Perhaps the length of time between administration of the instrument did not allow for sufficient contact with students during exposure to the new ideas; experience with the practical application of the training with the students over time may be necessary to changing attitudes.

A study by Smith[4] illustrates the use of the semantic differential to measure attitude change in teachers towards the concepts of Vocational Education, Career Education and Industrial Arts. All the elementary teachers of an Arizona school district were stratified by grade level to create a pool of 200 teachers with the number of teachers in each stratum proportionate to the size of the grade in the total population. These two hundred were randomly assigned to an experimental and a control group. For one year the experimental teachers worked on the Comprehensive Career Education Model instructional units. The semantic differentials were given for the three concepts to all teachers prior to assignments to the two groups and at the end of one year. The three concepts were measured with thirteen bipolar adjective scales. In addition to the total score for the thirteen scales for each concept, subscale scores on the dimensions of evaluative, potency, and activity were computed and analyzed.[5]

The results of the study were inconclusive. The evaluative dimension which usually accounts for two thirds of the common variance (see Osgood et al) showed no significant differences on the concepts between groups on pretest, posttests or change over time on the pre-post measures for either group. The evaluative dimension is the primary index of attitude change or affective domain effects. The concept of Industrial Arts did appear to be affected for the experimental group over the one year treatment, however. Significant differences were found between the experimental group's pretest and posttest scores on the potency, activity dimensions and on the total score for Industrial Arts. Also, a significant difference was found between the two groups on the post test measures of the potency dimension for this concept.

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[3]The ten concepts were: Physical Impairment, Teaching the Disadvantaged/Handicapped, Use of Slang Terms, Counseling the Disadvantaged/Handicapped, Hostile Students, Visiting the Homes of Disadvantaged/Handicapped Students, Language Barriers, Motivating Disadvantaged/Handicapped, Culturally Deprived, Living in the Ghetto.

[4]Smith, William Frank, Career Education, Industrial Arts, and Vocational Education: a Semantic Differential Study, Arizona State Univ., Unpublished doctoral dissertation 1974.

[5]See Osgood, C.E., Suci, G.J., and Tannenbaum, P.H., The Measurement of Meaning. Univ. of Ill. Press, Urbana, Ill., 1957 as well as Snider, J.G. and Osgood, C.E. (Eds.), Semantic Differential Technique, Aldine, Chicago, 1969

Of particular interest to the current study is the work of several researchers[6] who postulated that there may exist a personality variable in teachers which may be called "change orientation", an individual's predisposition or attitude towards change. They were concerned with teachers' willingness to adopt innovative programs and practices and felt that such a variable would differ significantly among teachers who were innovators or early adopters and those who were laggards. These three groups were defined as: innovators - those who are the first to adopt a new idea; early adopters - those who adopt new ideas slower than innovators but more readily than others; and laggards - those who are last to adopt an innovation or new idea. It was shown in Christiansen's research that the majority of teachers (approximately two-thirds) fall evenly into two middle categories called the Early Majority and the Late Majority of adopters.

Building upon the previous research and conceptualizations in this area, the research of Russell et al of the Center for Vocational and Technical Education at Ohio State University sought to measure change orientation. Being primarily concerned with vocational education, the researchers set out to operationalize the concept for the broad spectrum of vocational areas and to test the measurement instrument by establishing its validity and reliability.

The development of the instrument to measure change orientation was performed by the Center for Vocational and Technical Education with specialists in psychometrics from Educational Testing Service and other universities. Fifty vocational teachers according to clear specification generated some 1300 attitude statements in eight areas selected to represent discrete areas aspects of vocational education, three areas or subscales were drawn from the three goals of vocational education related to teacher activity in the Vocational Education Amendments of 1968.[7] The other five subscales were "functional" areas of vocational education which represented areas of direct responsibility for change by teachers.[8] The attitude statements generated by the teachers were given to a team of sixteen researchers experienced in attitude scale development who edited and refined the items, yielding six hundred statements, seventy-five per subscale. Project staff selected sixty items per subscale to be resubmitted to the teacher group for rating along a seven interval cont inuum to yield scaling weights. From the analysis of the scaling, thirty items per subscale were selected for the final instrument, to be scored by a modified Likert procedure.

[6]Russell, Earl, The Development of an Instrument to Measure the Change Orientation of Vocational Teachers, Ohio State University, unpublished doctoral dissertation, 1971 and Measurement of the Change Orientation of Vocational Education Teachers: a Final Report, Center for Vocational and Technical Education 1972, Christiansen, J.E., The Adoption of Educational Innovation Among Teachers of Vocational Agriculture, Ohio State University unpublished doctoral dissertation, 1965. Rogers, E.M., The Diffusion of Innovations, the Free Press New York 1962.

[7]These goals were: Reducing the number of under-prepared people entering the labor market; Meeting the special needs of disadvantaged students; and Beginning preparation for employment at an earlier age.

[8]These five subscales or areas were: Cooperative education; Individualization of instruction and behavioral objectives; Adult education; Team teaching and differentiated staffing; and Core vocational curricula.

A major interest of the researchers was to test the validity of the developed instrument, they felt it desirable to select for respondents teachers who were "known" to be at either end of a continuum of favorable-unfavorable towards change in vocational education (i.e. innovators of early adopters and laggards). Supervisors in state division of vocational education in thirty-eight states representing all service areas of vocational education nominated their least and most innovative vocational education teachers. One hundred twenty-five teachers in each of the known groups were finally selected by the researcher from approximately twelve hundred nominations to reflect a proportional representation across states and vocational areas as well as meeting the criteria for inclusion in each known group by assessing the supervisors' nominating reasons.

While the development process of the instrument focused content validity of the attitude statements, construct validity was assessed in several ways. First, the scores on the subscales and total scores for the two known groups were compared to obtain an estimate of the construct validity. Second, the scores on subscales and total scores for both known groups were ccorelated with four other instruments completed by the teachers which were deemed to be measuring theoretically related variables: the Rokeach Dogmatism Scale, the Dye Local-Cosmopolitan Scale, the McClosky Conservatism Scale, and the Rotter Internal-External Control Scale. Thirdly, the responses to the items of the change orientation instrument were factor analyzed to determine the degree of correspondence of the factors with the priority designation of the subscales.

Concurrent validity of the instrument was assessed by comparing the scores of the known groups with their responses to a questionnaire which asked them to ennumerate the "unique or unusual features" of their respective vocational education programs which served as an indication of the level of innovation or change activity.

The general findings of the study tend to support the research hypotheses in the measurement of change orientation. First, the factor analysis showed that there existed a general factor which powerfully discriminated between the two know groups as well as three subfactors which did not discriminate between groups when the effect of the general factor had been partialed out. The general factor consisted of twenty-one items which was used in separate analyses of the data. The reliability of the general factor items was .91 as determined by Kuder-Richardson Formula 8. The eight subscales were similarily shown to have reliability coefficients varying from .76 to .97 with six greater than .90. The general factor drew items from six of the subscales with 17 of the 21 items from three subscales (Occupational education in the elementary school, individualized instruction and behavioral objectives, and team teaching and differentiated staffing.) Of the three subfactors, one was relatively weak in terms of cumulative factor loadings. The other two were relatively strong, one drawing items completely from the Adult Education subscale and the other completely from the Core Vocational curricula subscale.

In comparing the two know groups, the early adopters and innovators as a group were found to have higher change orientation than the laggard group with statistically significant differences shown on the general factor and on five of the eight subscales.[9] There was some support for the contention that change orientation would be significantly negatively coorelated with the other attitude instruments. All coorelations were negative between the four instruments and the general factor and eight subscales, but only six correlations coefficients were greater than r=.30. The McClosky Conservatism Scale and the Local-Cosmopolitan Scale correlated significantly with six subscales and with the general factor of change orientation. In differences between the known groups, early adopters/innovators were significantly lower in Dogmatism, Localism, and Conservatism than were the laggards. No difference was found between groups on the Rotter Internal - External Control Scale however. In terms of special program features employed by the teachers of the two groups, the innovators/early adopters had significantly more unique and unusual features. Although there was a significant positive correlation between general factor of change orientation and the number of such special features, the degree of relationship was low, r=.22.

The significance of the study of change orientation lies in the demonstrated measurability of the construct in vocational teachers. Significant and consistent differences were shown between two groups of teachers who differed in instructional practices. The differences and relationships between variables/instruments was in the direction predicted by the research hypotheses. While the preliminary tests suggest that the instrument possesses validity, the researchers who developed it urged further research with the general factor scale. One particular line of inquiry suggested was to determine whether or not the Change Orientation Instrument can detect attitude change in vocational teachers who have undergone an experimental treatment regarding change.

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[9] The significant subscales were : Reducing the number of underprepared people entering the labor market; Beginning preparation for employment at an earlier age; Individualization of instruction and behavioral objectives; Team teaching and differential staffing; and Core vocational curricula. The three non-significant subscales were: Meeting the special needs of disadvantaged students; Cooperative education; and Adult Education.

Since its development, the Change Orientation Instrument has been used in about a dozen studies (personal communication with Russell). Four studies are currently in operation and nine have been completed.[10] The instrument has continued to display the high reliability demonstrated in the developmental study. In terms of validity, the concept of change orientation as measured by the general factor of the instrument has been shown to be significantly related in these studies to: the adoption of the practice of using behavioral objectives; teachers' perceptions of emerging professional roles; professional-organizational functioning styles of administrators and teachers; students attitudes towards classroom human relations and the meaningfulness of instruction; individualization of instruction and modularization; "openmindedness", "internal control", "cosmopolitan", and "liberal"; and proposal writing.

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Methods & Procedures

Research Design

The major questions to be answered by the summative research period of the OIC/A vocational Education Research Project are:

Does the OIC/A training treatment produce the desired attitude changes in teachers and counselors?

What kinds of attitude change occur for teachers and counselors?

Are there predispositions for attitude change and on-the-job practice in teachers and counselors which may affect the nature and magnitude of attitude change?

The determination of the longer range effects of the treatment upon classroom teaching and counseling behaviors would be the logical follow-up if the above questions showed attitude change effects differentially in terms of kinds of attitudes and school roles (teaching and counseling) resulting from the OIC/A treatment. However, such a study is beyond the scope of the present research.

The first question, does the treatment produce attitude change in teachers will be considered through use of a quasi-experimental design. Two treatment groups will be constituted in fall 1976, consisting of vocational education teachers and school counselors from Germantown High School. Each group will receive the appropriate OIC/A training. Prior to this treatment, they will complete a battery of pretest instruments. Upon completion of the training, a readministration of the battery will occur. In addition to the treatment groups, two comparison groups for the vocational education teachers will be identified. These groups will be other vocational education teachers of the school not electing to take the treatment and teachers of academic subjects. A comparison group of counselors not receiving the treatment will also be used. These three comparison groups will also receive the battery of instruments as a pretest and a posttest. The following chart shows the five groups.

TEACHERS

Training/treatment group - vocational education teachers participating
Comparison group 1 - vocational education teachers not participating
Comparison group 2 - academic education teachers not participating

COUNSELORS

Training/treatment group - school counselors participating
Comparison group 3 - school counselors not participating

Before discussing the specific comparisons to be made between groups to answer the research questions, it is necessary to describe the nature of the instrument battery to be employed in the design.

Instrumentation

There will be three basic instruments in the battery. The first is an attitude inventory designed specially to measure attitude change in relation to the content of the OIC/A training modules. There are two versions of this instrument, one for teachers and one for counselors, reflecting the different content of their respective sessions. The second instrument, which will be administered to both teachers and counselors, is a semantic differential with four concepts to be judged on twenty bipolar adjective scales. The third instrument is the Change Orientation Instrument developed by Russell and the Center for Vocational and Technical Education at Ohio State University. We will use the subscale, Meeting the special needs of disadvantaged students and the general factor scale for teachers and counselors. The items for these two scales total 48.

The inventory related to the attitudinal content of the OIC/A training (Content Scale - Teacher & Counselor verions) has been developed directly from interaction with the training programs for teachers and counselors. Items or statements were derived from the ideas, information, and values expressed in the OIC/A training materials and sessions. Respondents indicate relative agreement with statements on a four interval modified Likert-type scale. Both Content Scale versions were administered in a posttest only design to three groups of teachers and counselors in spring 1976. Two groups each of vocational education teachers and school counselors who had received the OIC/A training as well as a comparison group of teachers without the training experience completed the instrument.

The final instrument, both teacher and counselor version, has three separate areas or subscales. Each area reflects a particular concern of the OIC/A training. These areas of potential attitudinal impact are:

Vocational versus Academic Education - statements relating to the values of education, to specific practices in teaching, counseling, learning, training;

Society - statements relating to careers, jobs, occupations, and the functions of institutions;

Minority Group Students - statement relating to the experience of minority groups, their culture psychology, language.

See Appendix C for both versions of the complete instrument.

These two versions were developed by examining the materials in the training modules and by observing the training sessions in progress. From these two sources the values of vocational education and academic education that the OIC/A program is designed to modify were derived. In addition, specific teaching and counseling practices that OIC/A has identified as desirable were identified. Social questions and issues about careers, jobs, occupations and institutions were identified and the stance that OIC/A assumes on these issues was determined on the basis of the content of the training materials and the sessions.

Similarly, problems faced by minority group students in social institutions and the schools and in vocational education and employment were isolated and the attitudes and actions that OIC/A advocates were identified. These statements were written as items on an attitude survey using Likert-type scales. By scoring the items so that the desired response was the stance advocated by OIC/A, the degree to which the respondent agreed with OIC/A could be determined.

The validity of the items was assured inasmuch as they were taken directly from OIC/A's materials and presentations. The first administration of the instruments was done as a posttest only with participants in the OIC/A's program and with a comparable non-participant group. The analysis of these data, reported in the Formative Evaluation Section, revealed that among teachers the group that had the highest percentage of attendance in the program showed the most agreement with OIC/A's position. The comparison group, which had no involvement in the program, was farthest from the OIC/A position. Reliabilities of the two scales were computed at .70 for the counselor scale and .82 for the teacher scale. The reliabilities were calculated using the analysis of variance technique described by Weiner.[11] An item analysis was performed to determine what contribution each item made to the scores. As a result of this, several items were removed from the first version of the instrument and several items were rewritten to eliminate ambiguities.

The second instrument uses the semantic differential method of determining attitude change. Four concepts are to be evaluated by respondents in terms of bipolar adjectives. They are Vocational Education; Working with Vocational Education Students; Opportunities for Minority Group Students in Society; and Minority Group Students. Ten bipolar adjectives will anchor the seven-interval scales. The adjectives have been drawn from previous research to restrict the focus of the semantic differential to the evaluative dimension (i.e. the affective domain). The concepts were chosen to represent the areas of potential impact of the OIC/A training. See Appendix D for copies of the scales.

The third instrument to be used is the general factors scale and one of the subscales of the Change Orientation Instrument cited earlier (subscale B- Meeting the special needs of disadvantaged students). While there would be obvious advantages in administering the entire Change Orientation Instrument, the eight subscales total 240 items, a formidable inventory for many teachers' patience. Also, Russell (personal communication) has found in subsequent research now in progress that the general factor has been both a vaid and powerful measure of the construct. He also concurred in our decision to use the single, program related, subscale. A total of 48 items (21 from the general factor and 29 from the subscale with 2 general factor items taken from the subscale) would be reasonable in terms of time, considering the other instruments in the battery.

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[11] Weiner, B. J., Statistical Principles in Experimental Design, McGraw-Hill New York, 1962.

An anticipated one hour for completion of all three instruments would appear not to inordinately tax participants and comparison group members. As these items were originally generated for attitude measurement of teachers of vocational education, some items are addressed to teachers and worked accordingly. Those items will be modified to allow counselors to respond to them in reference to teaching in general. While the original instrument was normed on teachers responses, we deem an administration to counselors (all of whom have been teachers) as worthwhile. See Appendix E for copy of the scales. The following chart summarizes the groups and instruments of the research.

SUMMARY OF RESEARCH DESIGN AND INSTRUMENTS

GROUPS

T_t - the vocational education teachers receiving the OIC/A training treatment

T_c1- the vocational education teachers serving as a comparison group without treatment

T_c2- the academic education teachers serving as a comparison group without treatment

C_t - the school counselors receiving the OIC/A training treatment

C_3c- the school counselors serving as a comparison group without treatment

INSTRUMENTS

CST_t - teachers version of the Content Scale - total score

CSC_t - counselors version of the Content Scale - total score

CST_1 - the first subscale (Vocational/academic education) of the Content Scale for teachers (CSC_1 - denotes this subscale for counselors)

CST_2 - the second subscale (Society) of the Content Scale for teachers (CSC_2 - denoted this subscale for counselors)

CST_3 - the third subscale (Minority Group Students) of the Content Scale for teachers (CSC_3 - denotes this subscale for counselors)

SD_1 - the first concept (Vocational Education) of the semantic differential given to both teachers and counselors

SD_2 - the second concept of the semantic differential (Working with Vocational Education Students) given to both teachers and counselors

SD_3 - the third concept (Opportunities for Minority Group Students in Society) of the semantic differential given to both teachers and counselors

SD_4 - the fourth concept (Minority Group Students) of the semantic differential given to both teachers and counselors

CO_g - the general factor of the Change Orientation instrument given to both teachers and counselors

CO_s - the subscale (Meeting the special needs of disadvantaged students) of the Change Orientation instrument given to both teachers and counselors

Analysis

The three instruments applied to the two treatment groups and the three comparison groups will be analyzed in a manner which addresses the basic questions of the research design. The instruments interrelate concepts which will provide several foci through which to understand the effects of the training treatment and, in fact, the basic attitudinal structure of teachers and counselors in this population.

Question 1. Does the OIC/A training treatment produce the desired attitude change in teachers and counselors?

Each instrument taken separately for a comparison of the three teacher groups and the two counselor groups will provide the basis for answering the first question. Research hypotheses might be stated as follows:

1) On the teacher version of the Content Scale - the treatment group will show significant positive attitude change on the pre-post total score measure relative to the two non-treatment comparison groups.

2) On the counselor version of the Content Scale - the treatment group will show significant positive attitude change on the pre-post total score measure relative to the comparison group.

3) On the semantic differential scales the treatment groups will show significant positive attitude change relative to their respective comparison groups for each concept.

4) On the change orientation measures (general factor and subscale) the treatment groups will show significant positive attitude change relative to their respective comparison groups.

Each of the above statistical analyses will use an analysis of covariance model with the pretest covaried.

Question 2. What kinds of attitude change occur for teachers and counselors?

The separate scales of each of the instruments may provide a basis for answering the second question. Since they are interrelated, there ought to appear some consistency in the patterns of attitude change. Research hypotheses may be stated as follows:

5) The Vocational/Academic Education subscales of the Content Scale for teachers (and separtely, the counselor version) and the semantic differential scales for Vocational Education and for working with Vocational Education Students will show significant positive attitude change relative to the comparison groups.

   As a sub-hypothesis, we expect there to be significant pre-test differences between the vocational teachers (both treatment and non-treatment) and the academic teachers on these scales. Such a finding would lend support to the instruments respective validities. This hypothesis reflects the belief that the academic teachers hold lower attitudinal values towards vocational education than do the vocational teachers.

6) The Society sub-scale of the Content Scale and the Opportunities for Minority Group students in Society concept scale of the semantic differential will show significant positive attitude change relative to the comparison groups.

   Differences between the two treatment groups on these two measures will be analyzed to ascertain differential effectiveness of treatments within a common area. This approach seems justified; although different groups (teachers and counselors) receive different treatments, it is our judgment that there exists a common OIC/A "ethos" with respect to the society construct which maybe differentially effective between the two groups.

7) The Minority Group Students Subscale of the Content Scale; the semantic differential concept of Minority Group students; and the change orientation subscale of meeting the special needs of the disadvantaged will show significant positive attitude change relative to the comparison groups.

   Differences between the two treatment groups on these three measures will be analyzed to ascertain differential effectiveness of treatments within a common area since it is again reasoned that the OIC/A ethos pervades both training treatments.

Each of the above statiscal analyses will use an analysis of covariance model with the pretest covaried.

Question 3. Are there predispositions for attitude change and on-the-job practice in teachers and counselors which may affect the nature and magnitude of attitude change?

The separate subscales of each of the three instruments as described in the previous section will show specific areas of attitude change through the separate analyses of covariance with the pretest covaried. However, if predisposition to change operates in the population of teachers and counselors, such a phenomenon would be masked in that analysis. Therefore, we propose to further analyze the data from the separate subscales via an additional covariate, the general factor of the Change Orientation Instrument. The specific research hypothesis may be stated as follows:

8) The three subscales of the Content Scale; the four concepts of the semantic differential; and the subscale of the change orientation instrument will show a significant relationship between positive attitude change on these scales and degree of positive change orientation for the treatment groups relative to the comparison groups.

Thus, if the hypothesis were supported, one could state that those teachers and counselors who were initially high in change orientation (inclined towards change) were those who were most affected by the treatment. Russell[12] believes that the instrument's general factor scale to be potentially useful for such a purpose - discriminating among possible candidates for training or retraining so as to initially introduce a program or process to only those high in change orientation (most likely to readily adopt the innovation).

The following chart summarizes the data analyses to be performed.

12 Russell, Earl B. Upgrading Curricula Through Change Oriented Teachers. Theory Into Practice Vol XIV, Number 1, 1975 1127-31.

SUMMARY OF THE DATA ANALYSIS

Question 1. Does the OIC/A training treatment produce the desired attitude changes in teachers and counselors?

T_t vs. T_{c1} vs. Tc2 - CST_t ; SD1, 2,3,4 ; CO_g

C_t vs. C_c - CSC_t ; SD1, 2,3,4 ; CO_g

Question 2. What kinds of attitude change occur for teachers and counselors?

T_t vs. T_{c1} vs. T_c2 - CST_1 ; $SD_{1,2}$

C_t vs. C_c - CSC_1 ; SD1,2

T_t vs. T_c1 vs. T_{c2} - CST_2 ; SD_3

C_t vs. C_c - CSC_2 ; SD_3

T_t vs. C_t - SD_3

T_t vs. T_{c1} vs. T_{c2} - CST_c; SD_4; CO_s

C_t vs. C_c - CSC_3; SD_4; CO_s

T_t vs. C_c - SD_4; CO_s

Question 3. Are there predispositions for attitudes change and on-the-job practice in teachers and counselors which may affect the nature and magnitude of attitude change?

Identical analysis to question two with CO_g pretest score used as a covariate.

The Context of the Research

The OIC/A treatment training of the Germantown High School teachers and counselors began on the third week of December. Thus, pretesting of all vocational teachers, school counselors, and respective academic teachers was initiated the last week of December and completed in the first week of January. Posttest data collection began on February 2.

Description of Treatment

The VERP program that was implemented at Germantown High School differed in many respects from the versions that were field tested at Carlisle and at Central Montgomery County. The teachers at Germantown High School, by and large, live "far from the school" in terms of geographic distance or socio economic distance. This differs from both of the other two schools because in those districts the teachers either live in the district or live nearby in areas that are very similar to the municipalities served by the school. The students who attend Germantown High School all live in a very densely populated urban area compared to the students who live in suburban and rural areas served by the other two school districts.

The ethnic mix of the students at Germantown is strikingly different from the other two settings in that nearly one hundred percent of the Germantown students are black. Another difference, to even the casual observer, is the mode of transportation used by the students to reach school each morning. In the first two treatment settings the students ride to school on school buses provided by the district with convenient routes that provide bus stops near the students' homes or in their own cars in the case of some students who are old enough to drive. In contrast, Germantown students walk to the school, some from their homes, if they live within walking distance or cannot afford bus fare, or from nearby bus or trolley stops for those who ride to school on the city's public transportation system. The system of transportation utilized by Germantown students is conducive to tardy arrivals straggling in long after the beginning of the school day. This leads to slow start-up for the early periods of the day with latercomers interrupting the first, second and sometimes third period classes. In this urban setting the teachers have bonded into a strong teacher's union assuming a strength and autonomy not enjoyed by the teachers in the previous sites.

The teacher's union in the city of Philadelphia conducts itself with considerable professionalism taking the educational needs of students seriously. Unfortunately, at the beginning of the 1976-77 school year there was the threat of a teachers' strike hanging over the city schools. As a result this project was unable to begin concurrently with the beginning of the school year. The project personnel maintained close contact with the administration of the school through these early weeks. However, no action was possible until the strike situation was cleared up. As a result, considerable time was lost in the early weeks of the term in starting the project. After the possibility of a strike had passed, additional project time was lost since the administration fulfilled its obligation of working through the union stewards to present the project to the faculty. It was December before project personnel were notified that they could begin. The first session was held on December 16, twelve weeks into the school term.

On December 15, the names of the industrial arts teachers who had tentatively agreed to participate or who had expressed interest in participating in the project, were made available to project and evaluation personnel. The project personnel were ready to begin on very short notice and the project began on December 16th. On that date pretests were distributed to those teachers and counselors who came to the initial session and on the following day letters were distributed to the faculty mailboxes at Germantown High School for the teachers and counselors who were not participating in the VERP program. The timing was unfortunate in that many of the teachers did not receive this letter until Monday, December 20th. The situation was complicated by an early winter snow storm that struck the area on December 20th. The resulting travel conditions the next morning reduced teacher attendance, delayed returns from the comparison group and caused the postponement of the December 21st VERP session. A follow-up letter was distributed to the faculty of Germantown on Thursday, December 24th stressing the importance of their response to this pretest instiument. The combination of events, the snow storm and the coming Christmas vacation, bore heavily on the returns. Pretest returns did not begin to come in until after school had resumed in January. A second reminder letter was distributed to the faculty in January the day they returned from the holiday but the returns were disappointingly small. The actual returns are shown in Table I where the potential size of each subgroup that was identified is shown in the first column and the actual return from cooperating faculty is shown in the second column.

The training sessions were held in a building about one block from Germantown High School that houses an alternative school program. This comfortable, informal location provided a neutral setting for the project in the student's lunch room, using tables and chairs for the comfort of the participants. This particular facility has two adjacent rooms with a connecting door that are used as student lunch rooms. The sessions were held in these rooms with the teachers occupying the larger room and the counselors holding their sessions in the smaller of the two rooms. The staff had planned a flexible program that included combining teacher and counselor sessions on several occasions. This was done whenever the material to be presented was parallel and when the teacher group leader was better qualified to conduct a session relevant to the counselors or conversely when the counselor group leader was better qualified to present something to the teacher group. This flexibility was strained somewhat when one of the group leaders developed laryngitis and had to miss several sessions during a two week period.

The teachers' training program was conducted in a very relaxed, easy manner which allowed the teachers ample freedom to discuss the material and to shape the interpretation and application to meet their unique needs at Germantown High School. The group leader was very sensitive to the needs and wishes of the group as they did, at times, excitedly discuss some matters which, though not on the leader's lesson plan, were vital to the interest of the participants.

The counselors' group was much smaller than the teachers' group. Three of the 7 sounselors on the staff expressed an interest in participating in the program and actually began by attending the first 2 sessions. Unfortunately, one of these was unable to attend regularly so this group usually

TABLE I

POTENTIAL AND ACTUAL NUMBERS OF INDUSTRIAL ARTS TEACHERS AND COUNSELORS IN TREATMENT AND COMPARISON GROUPS AND ACADEMIC TEACHERS IN COMPARISON GROUP RETURNING PRETEST QUESTIONNAIRES

GROUP	IDENTIFIED	COOPERATING
Participant Industrial Arts Teachers	13	8
Comparison Industrial Arts Teachers	8	1
Participating Counselors	2	3
Comparison Counselors	5	3
Comparison Academic Teachers	147	27

consisted of the two people who attended on a regular basis and participated fully in the project. On one occasion only one of the counselors was in attendance on a day when it was not appropriate to combine the teacher group and the counselor group. The counselor group leader handled the situation by having a rap session with the counselor, concentrating on the areas that were to be covered that day.

The very small size of this two-person group precluded using some of the ice-breaker and warm-up activities. This was unfortunate since a number of these activities are useful counseling techniques and devices or they illustrated specific counseling techniques. On the other hand, a very positive outcome that was observed in this small group was the inter-action that occurred between the two counselors. Based on their comments, it was apparent that regular staff meetings are not held by the counseling staff at Germantown High School. In the context of the VERP project these counselors were able to share ideas and frustrations and techniques useful for overcoming certain road blocks that they encounter as they provided service for students at Germantown High School. The interraction and exchange of information was not limited to the counselors; the group leader was able to participate in these information exchange sessions and contributed substantially in many instances.

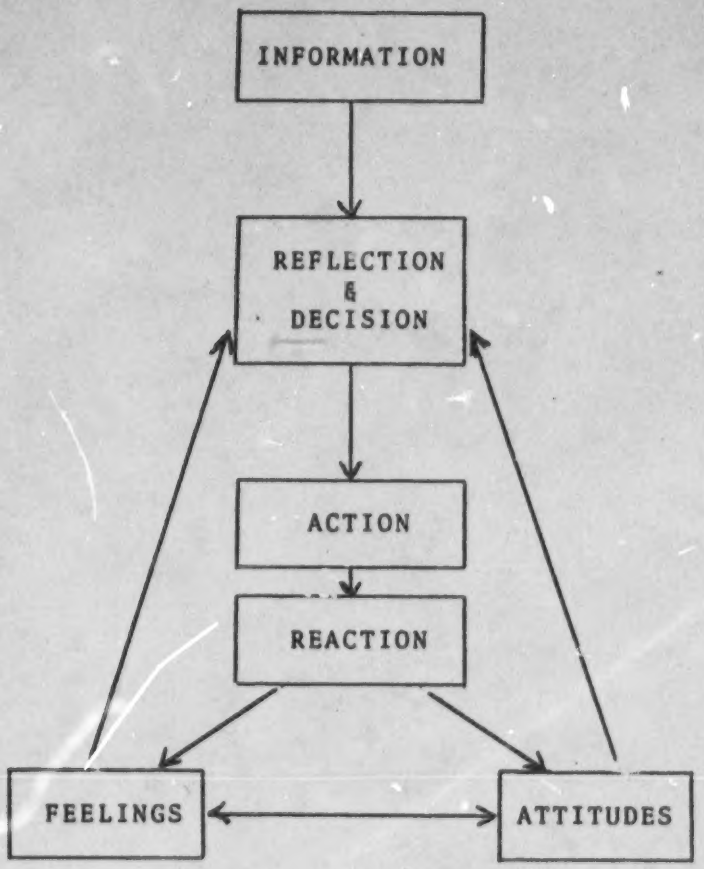
On the days when the counselor group and the teacher group met in combined session there was a very useful inter-change of information between and among the counselors and the teachers. The counselors were able to get a much clearer picture of the objectives of the teachers and the curriculum and

instructional content that the students experienced in the industrial arts classes. Conversely, during these inter-changes the teachers were able to gain vast amounts of information about the functions and objectives of the counselors and, perhaps most useful, they were able to pick up information about the course selection process that the students go through with the counselor a full semester before they appear in the class room. On more than one occasion counselors and teachers commented on the fact that Germantown High School, by virtue of the size of its faculty, limited the amount and kinds of information that could be circulated freely and quickly to the entire faculty. Within the context of the VERP training sessions, however, counselors and teachers were able to exchange information and learn about the objectives and problems of each other.

One additional consideration must be understood before the data can be analyzed and fully understood. The major objective of this project was to provide a better understanding of the conditions and problems that the minority group students find themselves in and to present some alternate ways for teachers and counselors to help these students. Educators tend to be conservative and slow to change until they see the wisdom in change. Their attitudes and the ways in which they respond to the needs of their students are deeply rooted in the very essence of their being. A project such as VERP attempts to bring about change by giving the participants information and helping them to deal with it cognitively. After educators, like other people, have had an opportunity to evaluate and assimilate new information, they are willing to take a position to begin to act on that information. In a situation such as this, where educators are asked to behave differently toward a group of students in their school, there is bound to be a reaction from the students and from other faculty members. Students will be cautious and a bit skeptical of changes they observe in faculty members. They will test new behavior and not trust until they have tested. Faculty members are also skeptical of change in the ways in which their colleagues deal with students. When a faculty member begins to behave differently toward students, other faculty members will feel uneasy or perhaps threatened. This combination of tentative change in actions and behaviors and the accompanying reactions from students and fellow faculty members will give the faculty member cause to stop and consider what is happening. These dynamics are depicted on the figure shown on the following page, as they might interrelate and influence each other. The figure illustrates that reactions will elicit feelings which will interact with existing attitudes. These feelings and these attitudes and values will cause a feedback to the cognitive step resulting in modifications to the actions that the faculty member is willing to take.

A project such as VERP requires some time for the full impact of the information imparted to be felt as an outcome in terms of actions that the individual will take. The imparting of information phase of the VERP program at Germantown High School was compressed into a one month period with the exception of the one meeting held in December. The short time span of one month is very little time for the iterative steps in the chain from information, reflection, and decision,to action. From an objective evaluation standpoint, little change can be expected.

Another factor that worked against definitive evaluation was size of subgroups. The potential existed for a comparison group of 155 teachers



and 4 counselors. This included 8 industrial arts teachers who were not participating in the project and 147 academic teachers. It was anticipated that since this is a vocational education project, all of the industrial arts teachers would be willing to participate and would cooperate readily. In particular, it was considered reasonable to expect that all of the industrial arts teachers would return both pre- and post-tests. It was further projected that about 30 academic (non industrial arts) teachers would respond to both the pre- and post-tests allowing for the planned comparisons that are detailed in the design presented in the Summative Research Phase, page 17ff. Unfortunately, the expectations of this complex field study and the realities did not turn out to be congruent. The returns are shown in Table II below. When the pretest results were compiled it was evident that the planned subgroup analyses could not be made. It was hoped, however, that most of the teachers who returned pretests would cooperate by returning posttests and allow for the application of a treatment vs. comparison group analysis of covariance as originally planned.

TABLE II

NUMBER OF TEACHERS AND COUNSELORS IN THE TREATMENT AND COMPARISON GROUPS WHO COMPLETED PRETESTS, POSTTESTS AND BOTH PRETESTS AND POSTTESTS

Group	Pretest	Posttest	Both Tests
Participant Industrial Arts Teachers	8	7	6
Comparison Industrial Arts Teachers	1	1	1
Participating Counselors	3	2	2
Comparison Counselors	3	-	-
Comparison Academic Teachers	26	11	5

Scoring Procedures

All of the content scales for both teachers (CST) and counselors (CSC) were scored by converting the responses, disagree very much (DVM) to agree very much (AVM), to a numeric value that related the respondent's position to the position advocated in the project materials. For example, if the concept was presented "suppressed minorities see education as a way to achieve upward social and economic mobility" a respondent who strongly agreed with this statement was given 7 points. A respondent who strongly disagreed with the statement was given 1 point. The score on each scale is a relative indication of the degree to which the respondent espoused the concepts presented in the seminars. It is important to realize that the scale does not measure the amount of information learned, but rather measures the degree to which the respondent agrees with the concepts. The rationale is that a successful series of seminars will result in the participants agreeing with the concepts more after the series is concluded than before the series began, while the comparison group will change very little during the same time period.

The change scales, Change General Factor scale (CSg) and Meeting the Special Needs of Disadvantaged Students scale (CSs) were scored by applying the equal interval loadings developed by the author.[1] The scale scores were

[1]Russell, Earl B., Measurement of the Change Orientation of Vocational Teachers, Research and Development Series No. 77; The Center for Vocational and Technical Education, The Ohio State University, Columbus, Ohio, (December, 1972).

derived by multiplying the individual item responses by the appropriate multiplier. The data transformation sheet used for scoring the content scales and change scales is shown in Appendix F.

The established method of analysis and interpretation of the semantic differential is to factor analyze the responses into the traditional scales of activity, evaluation and potency. The returns from both the comparison group and the treatment group were much smaller than had been anticipated. The number of usable responses from the study was too small to apply a factor analysis and expect to get stable, usable and interpretable factors that would be useful in comparing the two groups. Therefore, an empirical analysis was done by summing the responses across the scales for each concept. In this way each respondent was assigned a single score for each concept reflecting his overall evaluation of the concept on the general dimension defined by the scales. These individual concept scores were used as the basis of the comparisons between the treatment and comparison groups. A copy of the data transformation sheet that was used, with the semantic differential, is shown in Appendix G.

Analysis

The pretest returns were used to calculate a series of t tests to determine if the treatment group and comparison group of teachers were comparable on the 10 scales of the instrument. A similar series of tests was calculated for the counselors. These statistics are shown in Table III. The t statistics show that the groups are comparable on most of the scales. Both groups showed differences on one of the semantic differential concepts that was so large that the t's were statistically significant. In the case of the teachers, the treatment group viewed the Vocational Education concept higher or more positively than did the comparison teachers. There exists in some schools the practice of assigning students who are unable to adjust academically or socially in the academic programs to the industrial arts or vocational programs when other efforts have failed. It appears that this attitude persists among the teachers of Germantown and showed up as a difference in this scale. The counselor groups showed a significant difference on the Working with Vocational Education Students concept. The decision to participate or not to participate was left strictly to the discretion of each of the counselors individually. If the self-selection factor that motivated three counselors to participate, reflecting interest in vocational education, while an aversion to or low esteem of vocational education motivated the other four counselors on the faculty to elect not to participate, the difference is not surprising. Apparently some of the counselors were biased against vocational education students just as the academic teachers were biased against vocational education. These biases could explain the two significant differences that were observed. It should also be pointed out that two significant differences among 20 tests is not a very high number of significant differences. One significant statistic among 20 could have occurred by chance alone. The explanation suggested above, however, seems a more logical explanation for the significant t's that were observed than the probability explanation.

When posttest data were collected it turned out that only five of the comparison group and six treatment group teachers had responded to both

TABLE III

T-TESTS FOR DIFFERENCES BETWEEN PRETEST MEANS FOR TEACHERS AND COUNSELORS

Scale	Treatment			Comparison			T-Test
	Mean	S.D.	N	Mean	S.D.	N	
Teachers							
CST-1	35.89	5.86	8	39.90	5.40	25	.699
CST-2	49.33	4.16	8	47.76	5.11	25	.860
CST-3	34.86	4.47	8	34.24	7.34	25	.919
CST-T	120.08	7.00	8	122.42	11.91	25	.913
COg	311.19	20.13	8	316.99	25.25	25	.944
COs	457.98	38.85	8	461.36	53.12	25	.008
SD-1	5.49	1.48	8	5.80	.84	23	1.731
SD-2	5.74	1.12	8	5.59	.96	23	.954
SD-3	5.09	1.48	8	5.33	1.22	23	.500
SD-4	6.11	.73	8	5.74	.92	23	2.847**
Counselors							
CSC-1	59.33	4.51	3	54.57	2.38	3	.549
CSC-2	50.33	8.74	3	47.30	1.54	3	.115
CSC-3	37.67	3.21	3	36.20	2.31	3	.282
CSC-T	147.33	14.57	3	138.07	3.17	3	.125
COg	337.83	42.53	3	320.60	17.41	3	.024
COs	414.17	72.58	3	456.67	22.59	3	.022
SD-1	6.83	.15	3	6.13	.49	3	7.874**
SD-2	6.53	.64	3	6.17	.47	3	1.696
SD-3	4.70	2.41	3	4.97	1.63	3	.096
SD-4	6.70	.36	3	5.96	.64	3	1.956

** p .01

pre- and post-tests. With only six responses it was obvious that the analysis of covariance was not an appropriate statistical model to apply to the analysis. After examining the size of the responding groups it seemed much more reasonable to describe the data and not to apply any of the common tests of statistical significance. The choice that was made was simply to convert all of the group means and differences between means from pretest to posttest to a standard metric and to plot them on a common axis. The metric chosen was the standard error of the mean. The pretest to posttest change was standardized using the standard error of the mean as the base unit. In a general sense, a change that is greater than two standard errors represents more than error or chance fluctuation. The standard error was estimated by pooling as many observations as possible. The pooled observations for the teachers are shown in Table IV and for the counselors in Table V.

The findings are shown graphically in Figures 2 through 7. The figures show the amount of change in subgroup means that occurred between the pretest and the posttest. The change has been converted to a common standardized metric so that all scales can be compared directly by inspection. The unit that is utilized is the standard error of the mean. In simple terms, the standard error of the mean is way of showing how reliable the measurement is. For example, a floor measured with a carpet layers'rule would be accurate to within about 1/16 of an inch. On the other hand, if the same floor were measured using a foot ruler, the measurement would only be accurate to within an inch or more. Successive measurings using the foot ruler would differ from one measurement to the next by an inch or more. A large number of these measurements would average to close to the true dimension of the floor. The carpet layer rule would produce successive measurements that differ by only about 1/8 of an inch at most. Successive measurements with this rule would also produce a number of lengths that average to the true dimension of the floor. The errors associated with the measurements made by any means can be described statistically in terms of the standard error of measurement. In the case of the two methods of measuring a floor the carpet layers' rule would have a much smaller standard error of measurement than the foot rule.

When two successive measurements on any scale differ, some of the difference is due to error in the measurement and some can be attributed to changes that occurred between the time of the measurements.

Turning to another example, suppose we measure a twelve year old boy today and again in two months. We would expect some change in the height of a child of this age, twelve year old boys often grow very rapidly. At the same time, boys don't always stand straight when they are being measured. So some of the observed difference will be due to the difference in how straight the boy stands and some will be due to growth during the two months. If we know the standard error of measurement we can predict the probability than any observed difference is a true difference and the probability that any observed difference is due to an error in measurement. Any difference between two observations that is as large as one standard error of measurement has the probability of .67 of being a real difference and .32 of being an error. If the difference is as large as two standard errors, the probability that there really is a difference is .95 and .05 that the observed difference is actually due to errors in measurement.

TABLE VI

TOTAL TEACHER STATISTICS

ALL GROUPS AND TESTINGS COMBINED

TEACHER CONTENT SCALES

	CST 1	CST 2	CST 3	CSTT
Mean	38.47	49.25	35.35	123.30
S.D.	5.51	5.31	6.71	11.56
N	51	51	51	51

CHANGE ORIENTATION

	COg	COs
Mean	313.10	465.07
S.D.	31.90	53.74
N	51	51

SEMANTIC DIFFERIENTAL CONCEPTS

	SD 1	SD 2	SD 3	SD 4
Mean	5.67	5.67	5.17	5.94
S.D.	1.06	1.02	1.22	.85
N	48	48	48	48

TABLE V

TOTAL COUNSELOR STATISTICS

ALL GROUPS AND TESTING COMBINED

COUNSELOR CONTENT SCALES

	CSC 1	CSC 2	CSC 3	CSCT
Mean	56.59	49.86	36.45	144.90
S.D.	4.82	6.50	4.90	13.64
N	8	8	8	8

CHANGE ORIENTATION

	COg	COs
Mean	333.00	451.88
	27.34	59.40
	8	8

SEMANTIC DIFFERIENTAL CONCEPTS

	SD1	SD2	SD3	SD4
Mean	6.44	6.49	4.64	5.84
S.D.	.56	.53	2.25	1.81
N	8	8	8	8

In educational and psychological research, when the probability of some observed change occurring by chance, for example, because of errors in the measurement, is less than .05, the change is considered to be significant. The figures that follow show the change in terms of magnitude expressed in units of standard error of measurement. Direction expresses a desirable change (+) or an undesirable change (-). They also show how much change is required to be statistically significant.

The final version of the scales were compiled on the basis of the item analysis of the original administration of the prior version of the instrument. The scope of the study was not sufficient to support a separate validation administration of the instrument. In order to provide some estimate of the reliability of the instrument, the scores of the teachers in the comparison group who responded to both pretest and posttest were used to compute a test-retest reliability. The coefficients that are shown in Table VI are estimates of reliabilities, but they are reasonably high. The coefficients for the content scales range from .70 to .92. The change orientation scales have coefficients of .61 and .94. The sematic differential scales were lower, ranging from .50 to .85.

Findings

The outcomes of the pretest and posttest are shown on Table VII the teachers and on TableVIII for the counselors.

The teacher outcomes on the content area scales are shown on Table VIII and Figure 2. The Vocational vs. Academic Education Scale (CST-1) measured how vocational education is valued compared to how academic education is valued. The teachers in the program changed valuing vocational education more highly at the end of the experience than they did before the VERP sessions. The content of the sessions focused on the value of vocational education and in the short space of time that the sessions were held, the degree to which the participating teachers value vocational education increased. During the same period, the degree to which other faculty members at Germantown High School valued vocational education decreased. It is unlikely that the comparison teachers actually valued it less, but the letters and questionnaires from the evaluators did appear in their mailboxes and focused their attention on vocational education. This focusing of attention in the absence of positive input like the participant group was getting could have brought only existing negative feelings, attitudes and values into sharper focus. It is clear that at the end of the sessions the participants held vocational education in higher esteem than did the non-participating faculty.

On the content scale relating to society-careers, jobs, occupations and the functions of institutions (CST-2), the participants group changed their opinions and attitudes in the direction advocated by the program and reflected in the content of the instructional materials to such an extent that the change could be considered significant. Concurrently, the comparison group was asked to focus on these same issues without having the benefit of the sessions. They saw society and its institutions stacked against the minority person. As they view this situation and evaluate it, they see the

TABLE VI

PRETEST AND POSTTEST MEANS STANDARD DEVIATIONS AND TEST-RETEST RELIABILITIES (N=5)

Scale	Pretest		Posttest		r
	Mean	S.D.	Mean	S.D.	
CST1	37.52	5.96	36.52	5.10	.70
CST2	50.64	7.64	47.68	4.51	.86
CST3	33.30	3.05	33.88	2.60	.92
CSTT	121.44	13.52	118.08	6.98	.91
COg	313.06	27.51	303.96	32.08	.94
COp	434.90	50.87	437.42	28.27	.61
SD1	5.65	.79	5.62	.73	.61
SD2	5.70	1.16	5.96	1.38	.85
SD3	4.86	1.37	5.40	.95	.50
SD4	5.46	.69	6.12	.75	.53

TABLE VII

TEACHER PRE- POST- COMPARISONS

TEACHER CONTENT SCALES

	CST1		CST2		CST3		CST4	
	Trtmt	Comp	Trtmt	Comp	Trtmt	Comp	Trtmt	Comp
Pretest								
Mean	35.89	37.52	49.33	50.64	34.86	33.30	120.08	121.44
S.D.	5.86	5.96	4.16	7.64	7.47	3.05	7.00	13.52
N	8	5	8	5	8	5	8	5
Posttest								
Mean	36.63	36.52	51.14	47.68	35.79	33.88	123.56	118.08
S.D.	5.53	5.10	5.75	4.51	6.03	2.60	14.65	6.98
N	7	5	7	5	7	5	7	5

CHANGE ORIENTATION SCALES

	COg		COs	
	Trtmt	Comp	Trtmt	Comp
Pretest				
Mean	311.19	313.06	457.98	434,90
S.D.	20.13	27.51	38.85	50.87
N	8	5	8	5
Posttest				
Mean	302.81	303.96	479.91	437.42
S.D.	59.22	32.08	80.46	28.27
N	7	5	7	5

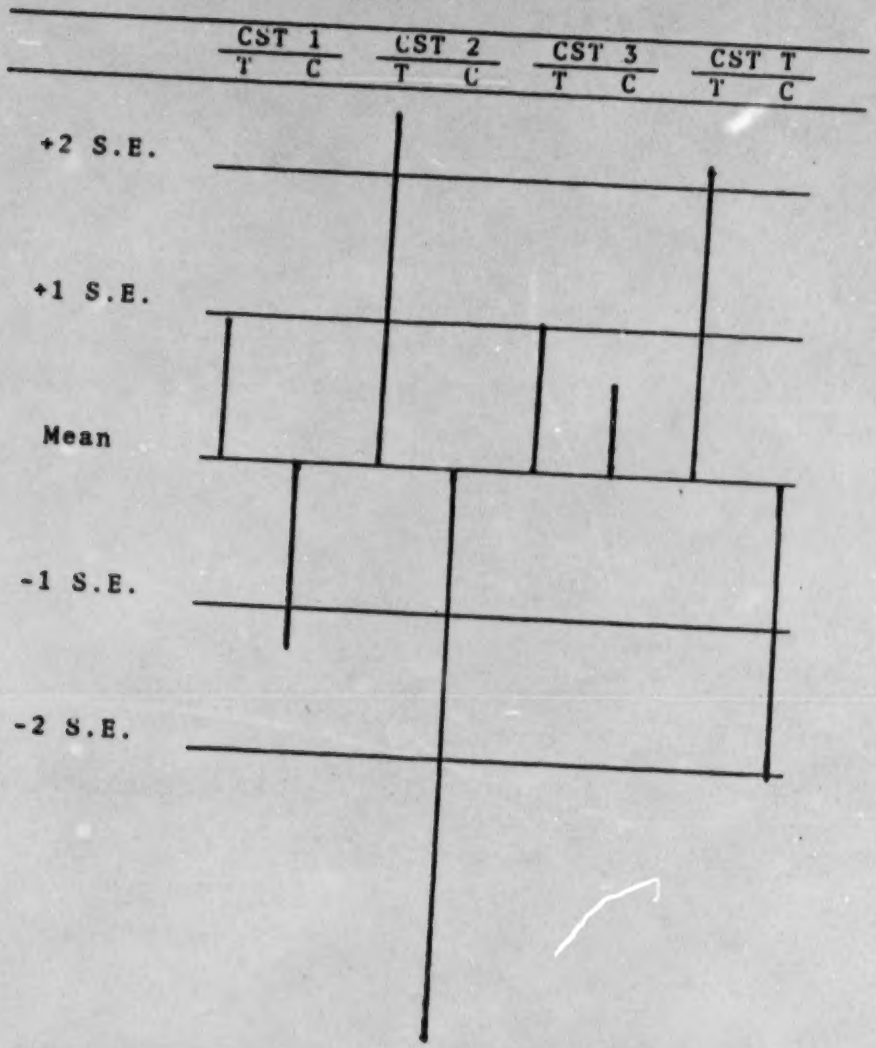
SEMANTIC DIFFERIENTAL CONCEPTS

	SD1		SD2		SD3		SD4	
	Trtmt	Comp	Trtmt	Comp	Trtmt	Comp	Trtmt	Comp
Pretest								
Mean	5.49	5.68	5.74	5.70	5.09	4.86	6.11	5.46
S.D.	1.48	.79	1.12	1.16	1.49	1.37	.37	.69
N	8	5	8	5	8	5	8	5
Posttest								
Mean	5.31	5.62	5.67	5.96	4.66	5.40	6.03	6.12
S.D.	1.43	.73	1.05	1.33	1.43	.95	1.10	.75
N	7	5	7	5	7	5	7	5

Figure 2

PRETEST TO POSTTEST CHANGE FOR TREATMENT AND COMPARISON TEACHER'S MEANS SHOWN IN RELATIVE UNITS WITH PRETEST MEANS SET TO ORIGIN

TEACHER CONTENT SCALES



situation becoming more hopeless and pessimistic. This shift was so large that it could be interpreted as being a significant negative shift. Clearly, the impact of the program on the participants was dramatic when compared to negative shift on the part of the comparison teachers.

The Teacher Content Scale that measure attitudes and values concerning the minority group student, (CST-3) showed a positive shift for both participants and non-participants. In this day when the civil rights movement is accepted and the Equal Rights Amendment is the current issue, it is likely that a short series of sessions would not have a very large impact on this dimension. One external event that would have had an impact on many people was the 18 hour television presentation of Roots. This could account for the approximately equal positive shifts shown by both treatment and comparison groups.

The Total Teacher Content Scale (CST-T) shows the composite shifts that were observed. The total participant group shifted a significant amount in the positive direction as a result of focusing on the minority group person enrolled in vocational education and examining him/her in a setting designed to enhance his value and the value of vocational education. In contrast to this, the comparison group demonstrated a shift toward hopelessness and pessimism when they focused on the same issues (through questionnaires) without benefit of the VERP sessions.

The Change Orientation Scale outcomes are shown in Table VII on Figure 2. The General Factor Scale (COg) which measures a general orientation toward change showed that both the group attending the sessions and the faculty who responded in the comparison group shifted downward, indicating less propensity toward change. The amount and direction of change were, in a statistical sense, identical for both groups. Whatever influences caused this change, impinged on both groups to the same degree. The comparison group shifted slightly more than 2 S.E. which may be considered a significant shift but the difference between the groups is so small that no interpretation can be made. It seems clear that the faculty at Germantown High School are homogeneous in respect to this construct and the change that was observed is an artifact of the testing.

In contrast to the homogeniety demonstrated on the general scales the Meeting the Special Needs of Disadvantaged Students scale (COp) showed profound change and difference. The construct measured by this scale was greatly affected by participation in the program. The participating teachers changed by 2.9 S.E., a significant change. Clearly participation in the sessions heightened the sensitivity of these people to factors of change, their orientation to change, and their willingness to change. This profound change on the part of participants may be contrasted to verylittle changes on the part of the people in the comparison group. It is this area in which the program had its most pronounced impact.

The Semantic Differential Scales showed very unusual results. On the first concept, Working with Vocational Education Students, (SD1) both the participant and comparison groups showed a small negative shift. Little interpretation can be made of this; apparently the evaluative adjetives were such that attending the sessions made no difference.

Figure 3

PRETEST TO POSTTEST CHANGE FOR TREATMENT AND COMPARISON TEACHER'S MEANS SHOWN IN RELATIVE UNITS WITH PRETEST MEANS SET TO ORIGIN

CHANGE ORIENTATION SCALES

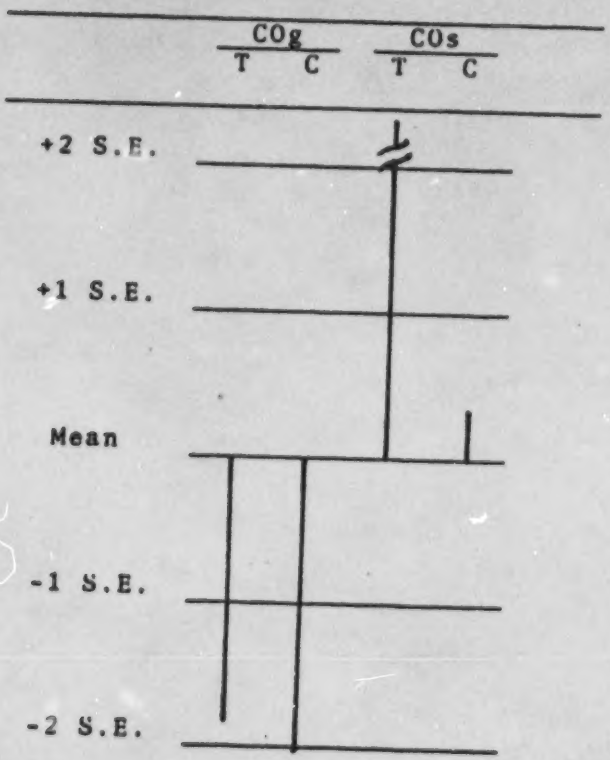
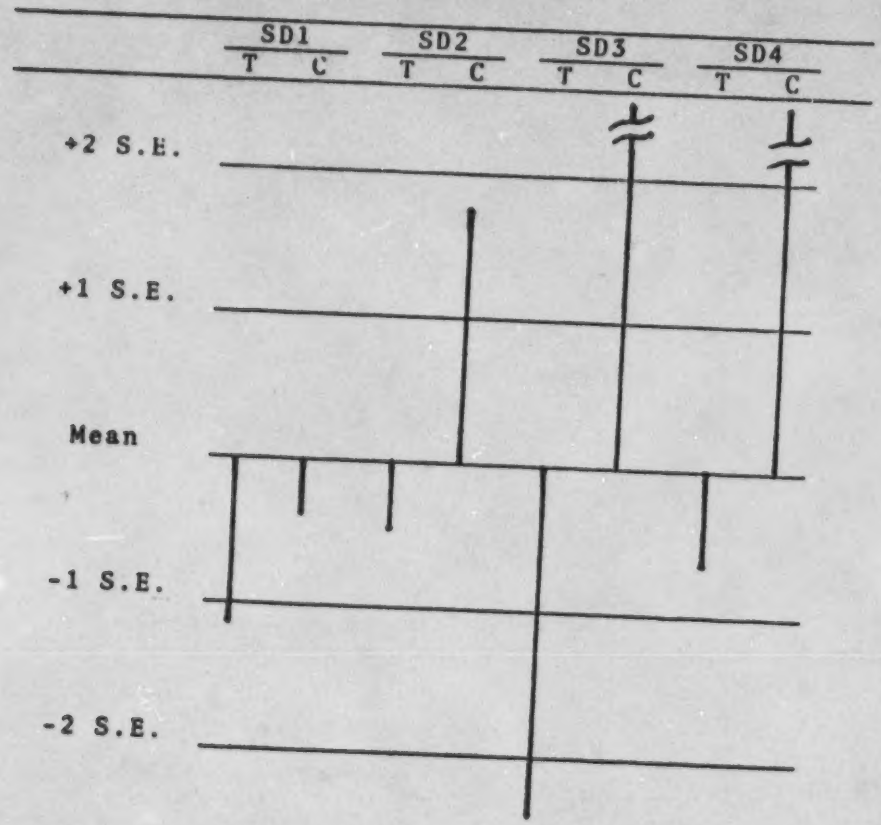


Figure 4

PRETEST TO POSTTEST CHANGE FOR TREATMENT AND COMPARISON TEACHER'S MEANS SHOWN IN RELATIVE UNITS WITH PRETEST MEANS SET TO ORIGIN

SEMANTIC DIFFERENTIAL SCALES



The Minority Group Students Concept (SD2) resulted in a differential change. The participants made a shift in the negative direction while the comparison group shifted in the positive direction. It could be that the very act of responding to this concept twice in the short time caused the people in the comparison group to become more sensitive to minority group students as people in general, and as a result evaluate them more favorably, while the people who participated were more sensitive to specific aspects of minority group students that were measured by the adjetive pairs that were used. This finding is somewhat at odds with the pattern that emerged on the content scale, CST-3, where the two groups both changed in the same direction. Clearly, the two scales are measuring something different.

The third concept in the semantic differential section was Opportunities for Minority Group Students in Society. On this concept there was a dramatic shift contrary to what would have been anticipated. On this concept the group participating in the program shifted significantly in a negative or pessimistic direction while the comparison group was shifting to a larger extent in the opposite direction. The explanation for this apparently contradicting result can be found in the logic that went into the construction of the scales. The content scales measure the congruence between the position taken in the instructional modules and the beliefs of the respondents. The semantic differential is measuring how the respondent values the concept in relation to the adjetive pairs presented. People in the comparison group moved away from the project position as shown on the content scale, CST 2, and indicated a shift toward an optimistic outlook on the opportunities for minority group students in society as indicated on this scale. This simply reflects an uncritical response that shifted from one testing to the next as a result of the response set selected when they were asked the same questions twice in a short time span. In the process they shifted their position to one that was more optimistic about the opportunities for minority students and shifted away from the project point of view---which some would say is very solidly rooted in reality. Concurrently, the participants were becoming more congruent with the project stance, and, as a consequence, more realistic (pessimistic).

The remaining semantic differential concept was Vocational Education (SD4). The teachers who participated in the seminar were all teachers of industrial arts, who had taught in this area for many years. It is unlikely that they would change their opinion very much in such a short time. This negligible shift is reflected in a slight negative shift in the means. The comparison group, on the other hand, was asked to evaluate the construct twice in a few weeks, with the introduction of some basis due to the short time span between the observations. The explanation lays in the fact that the people in the comparison group were asked by a vocational education project to value vocational education two times within a short time span. The respondents had no personal investment in the outcome one way or the other but, those who were helpful enough to respond, were also helpful enough to answer more favorably on the second round.

The Counselor results are more difficult to deal with than the teacher results. There are seven counselors in Germantown High School. Three of the seven agreed to participate in the program and three responded on the pretest. Unfortunately, the interest of the counselors was never really sparked. The average counselor attendance at the sessions was 1.98 and none of the four non-participants agreed to complete the posttest questionnaire.

As a result of this low level of participation, the testing results of the participants are less reliable and, there are no comparison results.

The test results for the counselors are shown in Table VIII. The relative changes in the means from pretest to posttest are shown graphically in Figures 5, 6 and 7.

The Vocational/Academic Education Scale (CSC1) measures the congruence between the beliefs and attitudes held by the counselors and the point of view reflected in the training modules. The SCS1 scale is based on the issues centered in the differences, similarities and relative valuation of vocational education vs. academic education. Reference to Figure 5 shows that the counselors who participated shifted to what could be considered a significant degree on this scale. After having experienced the VERP seminars, the counselors valued vocational education much more highly than they did before participating in the seminars.

The second content scale, Society (CSC-2) showed a positive shift from pretest to posttest. The content of several of the seminars focused on ways in which counselors could help minority group students use the institutions of society to their benefit in building careers. This was a very positive outcome for the project.

The Minority Group Students Scale (CSC-3) showed a shift toward the negative, the pessimistic. The seminars provided an experience that brought the participants into direct encounter with reality. As a result, the counselors adjusted their conceptions of what the minority group member faces in today's world to a more realistic level. In this case it was downward.

The Total Content score (CSC-T) reflects a positive change. As a result of participating in the sessions the counselors shifted their position to one of greater congruence with the position presented in the seminars.

The Change Orientation Scales are shown in Figure 6. The first scale, General Orientation to change shows a slight positive shift. This shift is so small that it does not represent any change. Considering the short time that the counselors were involved in the program, it is quite reasonable not to observe any change on this scale.

The Meeting the Needs of Disadvantaged Students (COs) shows a dramatic and significant shift. As a result of participation in the program, the counselors made a dramatic shift on this construct. It is clear that they picked up ideas and information about how to better meet the needs of disadvantaged students and they changed in their readiness and their likelihood of making such changes. Unless external events interfere, a lasting and significant change can be expected in this area.

The semantic differential scales show a consistent negative (pessimistic) shift as may be observed in Figure 7. This runs counter to the general findings on the other scales, five of the six scales were favorable to optimistic. A critical examination of the pretest returns revealed that one of the counselors responded to the semantic differential concepts with

TABLE VIII

COUNSELOR PRE- POST- COMPARISONS

COUNSELOR CONTENT SCALES

	CSC1		CSC2		CSC3		CSCT	
	Trtmt	Comp	Trtmt	Comp	Trtmt	Comp	Trtmt	Comp
Pretest								
Mean	59.33	54.57	50.33	47.30	37.67	36.20	147.33	138.07
S.D.	4.51	2.38	8.74	1.54	3.21	2.31	14.57	3.17
N	3	3	3	3	3	3	3	3
Posttest								
Mean	63.50		53.00		35.00		151.50	
S.D.	3.54		9.90		11.31		24.75	
N	2		2		2		2	

CHANGE ORIENTATION

	COg		COa	
	Trtmt	Comp	Trtmt	Comp
Pretest				
Mean	337.83	320.60	414.17	456.67
S.D.	42.53	17.41	72.58	22.59
N	3	3	3	3
Posttest				
Mean	344.35		501.25	
S.D.	14.77		62.72	
N	2		2	

SEMANTIC DIFFERIENTAL CONCEPTS

	SD1		SD2		SD3		SD4	
	Trtmt	Comp	Trtmt	Comp	Trtmt	Comp	Trtmt	Comp
Pretest								
Mean	6.83	6.13	6.53	6.17	4.70	4.97	6.70	5.96
S.D.	.15	.49	.64	.47	2.41	1.63	.36	1.00
N	3	3	3	3	3	3	3	3
Pretest								
Mean	6.30		6.90		4.05		4.35	
S.D.	.99		.14		4.17		3.75	
N	2		2		2		2	

Figure 5

PRETEST TO POSTTEST CHANGE FOR TREATMENT COUNSELOR'S MEANS SHOWN IN RELATIVE UNITS WITH PRETEST MEANS SET TO ORIGIN

COUNSELOR CONTENT SCALES

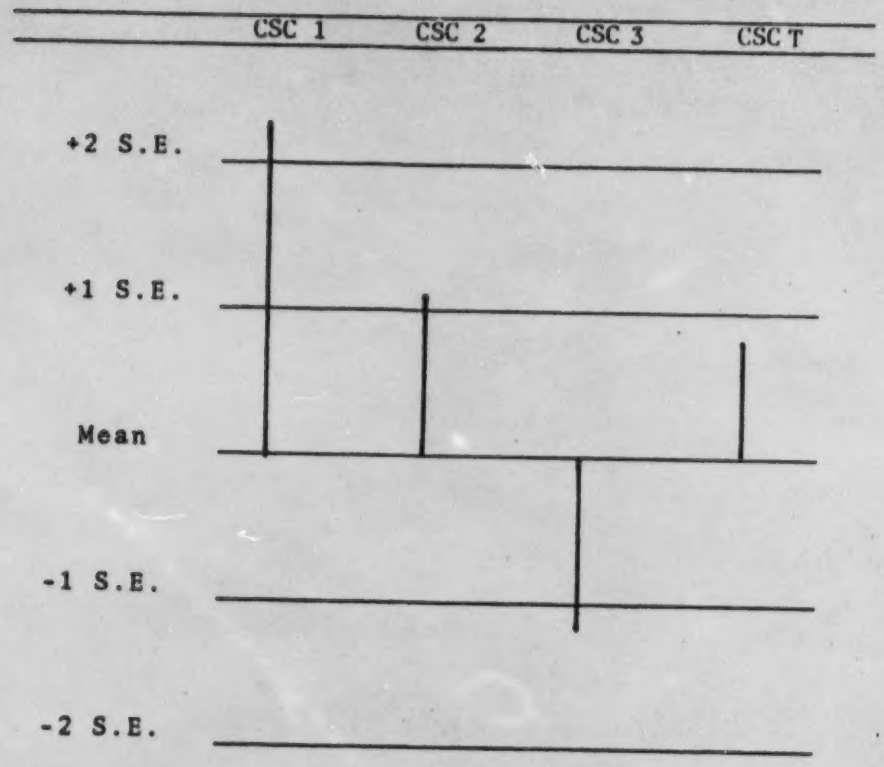


Figure 6

PRETEST TO POSTTEST CHANGE FOR TREATMENT COUNSELOR'S MEANS SHOWN IN RELATIVE UNITS WITH PRETEST MEANS SET TO ORIGIN

CHANGE ORIENTATION SCALES

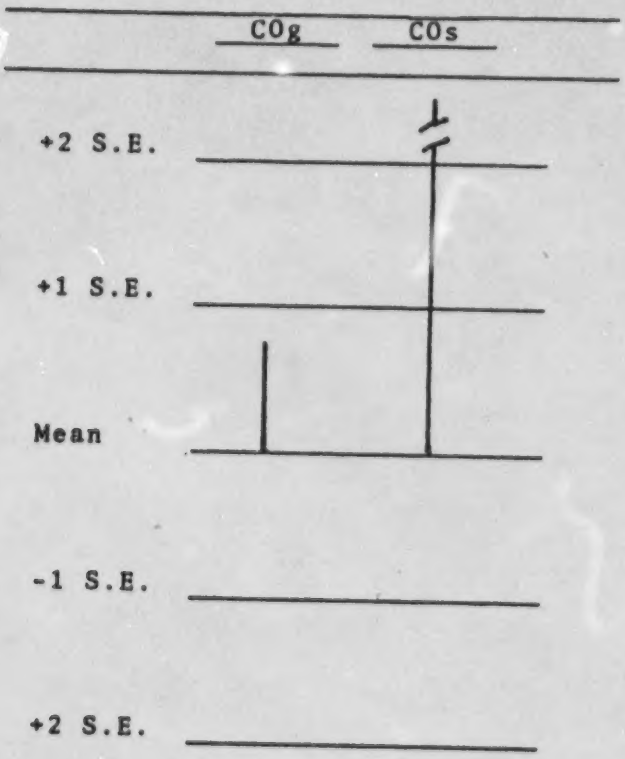
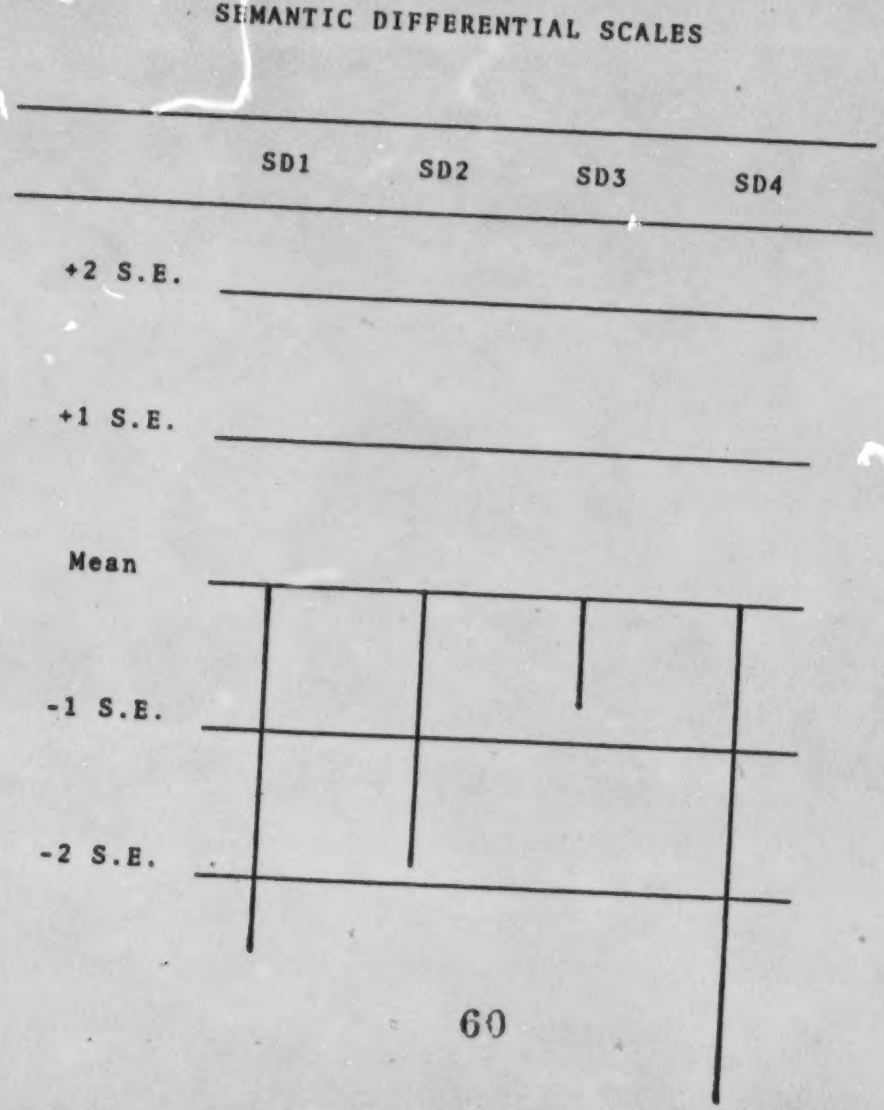


Figure 7

PRETEST TO POSTTEST CHANGE FOR TREATMENT COUNSELOR'S MEANS SHOWN IN RELATIVE UNITS WITH PRETEST MEANS SET TO ORIGIN



a strongly negatively biased response set. On some of the adjetive pairs the shift was as great as from "strongly agree" to "very strongly disagree"-- six points! This much shift was out of line when compared to all of the other returns. Because of this, this counselor's response is suspect and may be invalid. It was not eliminated because only two counselors completed posttest and any "case study" statistics were considered undesirable with these scales in this study. Unfortunately, the effect of half of the respondents was so great that it didn't average out in a statistical sense. Consequently, no interpretation of these scales can be made.

Conclusions

Returning to the major questions that were to be answered by the summative research period, some conclusions can now be drawn.

The first question was:

Does the OIC/A training treatment process produce the desired attitude changes in teachers and counselors?

On the scales that related directly to the content of the VERP seminars the teachers shifted in the desired direction on all scales. The counselors shifted toward the OIC/A's position on three of the four scales. Clearly, the program does have that effect. In addition to the content, there were interesting shifts on the propensity for change scales. Although no shift on these factors would be expected, both the teachers and the counselors made a significant change on the meeting the special needs of disadvantaged students scale. As a result of the seminars, both groups of participants were more prone to make changes and to be more willing to make changes. It is clear that the program does produce the expected attitude changes in teachers and counselors.

The second major question to be answered was:

What kinds of attitude changes occur for teachers and counselors?

The changes are of three types. The first is in terms of content presented in the seminars. Here the participants changed on seven of the eight measurements (four scales x two groups). Clearly, the experience convinced the participants to hold the attitudes that the project deemed desirable. The second type of change was the Change Orientation dimension. The Change Orientation scales were developed to predict readiness for change and by referring to the findings presented above, it can be observed that participants are more inclined to change in the area of meeting the needs of minority students as a result of the experience. The third type of change was the measure of change in valuing of certain concepts shown by the semantic differential. The findings are only valid for teachers, but it can be observed that Vocational Education and Working with Vocational Education Students were valued a little less after the experience than before. In contrast, Minority Group Students and Opportunities for Minority Group Students in Society were valued more highly after

the experience than before.

The final question that can be answered is:

> Are there predispositions for attitude change and on-the-job practice in teachers and counselors which may affect the nature and magnitude of attitude change?

The answer to this question is found in the comparisons between the treatment and comparison groups at the beginning of the study. It was observed that the groups did not differ on the degree to which they agreed with the seminar material. In addition, before the seminars the groups did not differ on their readiness or tendency toward change as reflected on the Change Orientation scales. There were some differences in how the groups valued some related constructs as noted on the semantic differential concepts, but this could be expected and did not affect the outcome. Clearly, the groups were not different in respect to predisposition to change.

One other outcome, not anticipated or planned, was probably more important than any of these. That was the interaction and information exchange that took place among the teachers and the counselors and between the two groups. Clearly, this outcome was the most significant for the VERP participants at Germantown High School.

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APPENDIX A

TEACHER AND COUNSELOR MODULES

Session I — Orientation: Description of OICs of America and purpose of all Modules.

Session II — The Development of the Minority and Disadvantaged Youth: The evolution of the city as the focus for satisfying emerging expectations and aspirations; evolution of the ethnic neighborhood.

Session III — Keeping Communication Channels Open: Establishing effective communication; effecting instructional changes.

Session IV — Growth and Development of Middle Class Values: The work ethic and fulfillment of aspirations; the stratification of the population; the school as a motivating factor; practices and concepts.

Session V — The Changing Population: The out-migration movement; rapid in-migration; overcrowding and deterioration; the emerging disadvantaged youth.

Session VI — The Target Area Schools: Courses, objectives, and the target population.

Session VII — New Directions in Education for the Target Areas: The relevancy of basic philosophy; Academic vs. Vocational - What shall be the product?; the need for change - facing new demands.

Session VIII — Meeting New Education Demands: Awareness of the administration to meeting new education demand; staff readiness.

Session IX	Updating Vocational Education in Target Area Schools: An illustration for vocational education administrators and school staff of new developing occupational disciplines, demonstration of the need for participative roles in vocational schools in developing curricula and other instructional materials for the new disciplines; demonstration of the need for more effective methods and techniques for developing the potential of minority groups and disadvantaged students.
Session X	Demonstration of OICs/A Methods and Techniques: Identifying minority and disadvantaged student needs and aspirations: relating to minority and disadvantaged students; motivating minority and disadvantaged students; altering instructional approaches to service minority and disadvantaged students.
Session XI	Participation by Employers and Administrators in the Development of Minority and Disadvantaged Youth: Demonstration of the effectiveness of administrative leadership and support in the development and inception of new techniques for motivating and guiding minority groups and disadvantaged students; an example of a program utilizing school, employer, and community coordination.
Session XII	Elevating the Efficiency of Vocational Education: Reversing practices of discipline and detention; administrative attitudes and policies; modified instructional objectives, success-oriented materials and instructional techniques, with relevancy to minority groups.
Session XIII	Developing New Effectiveness in Vocational Instruction: Current curricula as a source of manpower; meeting immediate and projected needs.

Session XIV

Determining Application of Methods and Techniques Proven Effective by OICs/A to Meet Individual Differences: Role playing; team teaching approach; gestalt influence; OJT, ethnic concepts and interests

Session XV

Altering Instructional Materials as they Relate to Minority and Disadvantaged Students: The adequacy of courses of study.

Session XVI

Adapting/Revising, Developing Materials: Individualized instruction-sequentially serialized; team teaching-interdisciplinary instruction; micro-teaching

Session XVII

Building Interrelationships of Administration, Counseling and Instruction: The importance of administrative and instructional support of vocational guidance and counseling.

Session XVIII

Developing Listening Techniques: Listening "between the lines"; developing the fine art of listening; body language-what it can and cannot tell you; reading students-the straight ball or the curve?

Session XIX

Increasing Local Participation: Eliminating the barrier between the school and its patrons; drawing on resources from the community.

Session XX

Legal Implications for Counseling: An investigation of the need to keep abreast of changing laws so that counselors can be adequately protected against liability while carrying out their duties.

COUNSELOR MODULES

Session I

Orientation: Description of OICs/A and purpose of all Modules.

Session II

An Historical View of Minorities: Comparing and contrasting the majority culture to the culture of those minorities identified in the participating communities.

Session III

Process of Counseling: The application of OICs/A's Guidance and Counseling Intake process to Central Montgomery County Area Technical School.

Session IV

Ongoing Counseling: The application of the second phase of OICs/A's Guidance and Counseling System to Central Montgomery County Area Technical School.

Session V

Group Orientation and Group Counseling: The advantages and disadvantages of group counseling as compared to individual counseling of minority and disadvantaged students in Central Montgomery County Area Technical School.

Session VI

Counseling/Outreach: Steps in the establishment of liasons with post secondary institutions; advanced skills training centers; OJT programs, and employment agencies to facilitate continued career advancement.

Session VII

Interviewing Techniques: The degree of freedom present in an interview (ranging from formal to informal); interviewing as an integral part of the OICs/A Guidance and Counseling System.

Session VIII

Directive Technique vs Nondirective Technique: The application of directive and nondirective techniques as utilized by the OICs/A's Guidance and Counseling System.

Session IX

Eclectic Technique: The advantages and disadvantages of utilizing eclecticism; eclecticism as a tool of the OICs/A's Guidance and Counseling System.

Session X

Motivation: The process of motivation utilizing the OICs/A's Guidance and Counseling System.

Session XI	Decision Making/Formulation of Goals and Life Plans: The identification of strategies useful in the development of decision making skills for minority and disadvantaged individuals.
Session XII	Vocational Guidance/Career Education: The nature of vocational guidance, "the process of assisting the individual to choose an occupation", prepare for it, enter it, and progress in it; the application of OICs/A's Vocational Education Guidance and Career Education Guidance System.
Session XIII	Community Resources: Information re: available resources in your community and the effective utilization of these services.
Session XIV	Referral and Follow-Up: An examination of "referrals" as one mechanism for enlarging the scope of those existing services of the school; the application of OICs/A's methodology for instituting and/or expanding a referral and follow-up network.
Session XV	Placement and Follow-Up: The rudiments of OICs/A's Placement and Follow-Up System; a "how to" approach to instituting and/or expanding such systems.
Session XVI	Meeting the Parent; Counseling Adults: A close inspection of counselor-parent interaction; OICs/A's methodology re: counseling the adult.
Session XVII	The Misunderstood Counselor: A systematic look at the counselor and role expectations espoused by students, parents, teachers, administrators and other counselors; ways to enhance the counselor's image around town/school.
Session XVIII	Language: An examination of the use of formal and colloquial language; an inquiry regarding the implications of differing body language and body space when counseling minority and disadvantaged clients.

Session XIX

Sex Role Stereotyping: The implications (pro and con) of the counselor's inspiring young women to broaden their perspectives of the work available to all persons.

Session XX

Legal Implications for Counselors: An investigation of the need to keep abreast of changing laws so that counselors can be adequately protected against liability while carrying out their duties.

Appendix B
Example of Training Session

72

TRAINING SESSION

"Growth and Development of Middle Class Values"

Presentation: 20 minutes

Use of lecture and flip charts to show how children are inculcated with cultural values. Emphasis is on differences between low and middle-class values. Lecture material is based on Crow, Murry and Smythe Educating the Culturally Disadvantaged Child and Holt, How Children Learn.

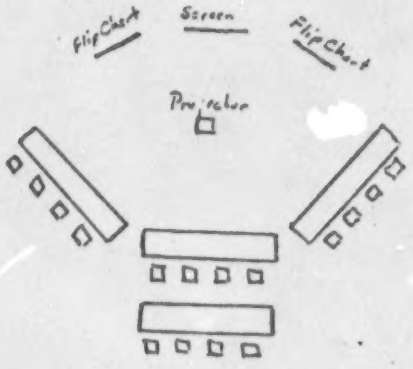
Film: 20 minutes

Film not named and no other reference is made to it.

Role Play: 20 minutes

An activity is shown that will help participants assess the strength of the values they hold. Each is asked to identify what he would be willing to: 1) die for, 2) fight (physically) for, 3) argue for, 4) take a position favoring, 5) tell friends about. After completing the worksheet, small groups are to discuss the items briefly and then go into full group discussion.

Room Set Up



The Observers Notes on the Session as it Occurred

The leader began the session on the stroke of 3:00 p.m. The topic was announced and a sheet passed to all the participants to fill out. There were five statements on the sheet for completion.

1. I would be willing to die for_____.
2. I would be willing to physically fight for_____.
3. I would argue strongly in favor of_____.
4. I would quietly take a position in favor of_____.
5. I will share only with my friends my belief that_____.

Each person is asked to complete the statements in order to determine the strength with which he personally holds certain values.

(The teachers seemed uneasy, they may not have felt comfortable about performing written work about their feelings. They also didn't know how this information was going to be used.)

While people were working on this task, the leader passed out an outline sheet to everyone present.

At 3:06 p.m. two people began to talk to each other and, as if on cue, talking broke out at an increasing valume around the tables. The leader stopped the talking about 30 seconds after it started by beginning the sharing of values and the strength with which they are held.

From around the tables came a variety of positions. To the first question, "I would be willing to die for....." came such responses as, me family, nothing and children. The second question, "I would be willing to physically fight for....." turned up family, children, no one and self. People said that they would argue strongly for....." truth, principles. They said that they would take a position on..... back biting and religion. They said that they would share their religious values with their friends.

The leader made the transition from the activity to the objective of the session by asking participants to think back and try to remember what they did to get the values on the worksheet. She asked, "What process did you go through to respond to the items?" This rhtorical question was answered by referring to the flip chart on the left which said, 1) Self-image, 2) Family, 3) Emotions, and 4) Relationship with Family.

By 3:12 p.m. the leader began the presentation much as a college lecturer might. The cover page of the flip chart on the right was pulled back and the lesson began.

The first chart was headed "The Hidden Curriculum."

home
environment
community
problems between home & school
social factors
peers
pressures - all kinds
media

The leader went down the chart giving examples of how each of the areas on the chart constituted an element of the "hidden curriculum" that had an effect on students and the shaping of their values.

Chart 3 said "According to culture and economic....." This was used to introduce the concepts of social class and economic status.

She quickly flipped to chart 4. Chart 4 said "Wider variety of social class differentiation found in urban areas." The teachers are for the most part from rural and suburban areas and they began to take exception with the statement. The leader listened to their point, said "right", and went on with her point apparently oblivious to what had been said and that it contradicted her point.

(When the leader said "Right" to the comment and didn't under stand it, it was evident that she was lecturing and not listening or interacting.)

She regained her composure and flipped to Chart 5 at 3:16. It said, "Extended Family -- Nuclear Family." This concept was developed noting the differences and similarities between the two family types. The presentation was diverted a bit when the teachers pointed out that the rural Germans on the big family farms have extended families and for them it is good, helpful and builds up the individual family members and contributes to their development rather than being detrimental and symptomatic of the socially disadvantaged.

At 3:21 the next chart was presented showing four interacting constituant parts of "Self-Concept."

Biological
Experience
Parent relationships
Perception of success or failure

(At this point the leader did a good job of changing pace and began calling on people by name to hold their attention.)

The group took over the discussion and finally agreed that perception of success of failure had to do with the degree to which people achieved "personal fulfullment."

The next chart, "Cultural Values" included the term "middle-class." The teachers demanded a definition of "middle-class." The leader tried to use the chart to define middle-class vs. socially disadvantaged using such terms as "Drive." One of the teachers made the point that the middle-class and socially disadvantaged differed on their need for immediate vs. delayed gratification. The leader began to sum up the chart but had to call the group to attention. The summation centered around the concept that the socially disadvantaged and the lower class were the same.

(The teachers were acting turned off at this point.)

At 3:50 the leader announced, "O.K. we are going to wind up with an exercise." The lights were turned off and a slide was shown on the screen. The teachers were asked to write down what they saw. A second slide was quickly flashed up but several teachers called for it back. The teachers began to talk among themselves and continued to do so when the third slide was shown. The fourth slide was shown for a few seconds and then removed. The teachers called this one back also.

The group appeared to be very uneasy about having to write quickly.

People were asked to tell the group what they had seen beginning at 3:55.

At 3:58 the group leader announced that they had just seen an example of how they all saw the same thing but had different perceptions of it. The point was made that values are similar inasmuch as events and factors affect us individually in different ways.

Session ended at 4:01.

APPENDIX C

THE CONTENT SCALE - TEACHER AND COUNSELOR VERSIONS

Each of the following statements is followed by a scale for you to mark. The scale and the meaning of each of the points is:

SA Strongly Agree
A Agree
NO No Opinion one way or the other
D Disagree
SD Strongly Disagree.

Each of the statements is a statement about teaching. Read the statements one at a time and after each one, mark your degree of agreement or disagreement.

For example, you may strongly disagree with the following statement.

Pupils who are habitually tardy should be executed by a firing squad at sunrise the morning after the fifth offense.

SA A NO D (SD)

You would record your strong disagreement by marking 'SD' as shown.

You may agree, but not strongly agree, with the following statement. If this were the case, you would indicate your agreement as indicated.

Pupils who are habitually tardy should be talked to by their home room teachers so that they understand the importance of punctuality and the teachers find out what the problem is.

SA (A) NO D SD

You may strongly agree with the following statement. If that were the case, you would indicate your degree of agreement as indicated.

Pupils who are habitually tardy should be referred to the guidance counselor for an interview so that the counselor can determine if there is some problem that prevents the pupil from getting to school on time. If such is the case, the two of them may be able to work out a plan to help the pupil to arrive at school promptly.

(SA) A NO D SD

Children from deprived areas enter the school poorly prepared in attitudes and background and are so ill-equipped to meet school demands that failure is almost inevitable from the start.

SA A NO D SD

In schools serving deprived areas both teachers and the children from these areas are disadvantaged with respect to each other.

SA A NO D SD

From birth, the child's environment has a strong effect upon his development.

SA A NO D SD

We will come to realize that some of the values of underprivileged groups are not only utilitarian but worthy of emulation.

SA A NO D SD

The integration of academic and vocational education will improve both while removing some of the undesirable elements of each.

SA A NO D SD

A college degree is the only respectable occupational preparation in our society.

SA A NO D SD

Four significant factors involved in formation of the self-concept are: the child's unique biological structure, a gradual accumulation of experience, relationships with parents or guardians, a perception of success or failure.

SA A NO D SD

When trainees learn that too few jobs exist "out there" their estimate of the value of education drops.

SA A NO D SD

The child defines himself in terms of what he is exposed to and how he is exposed to it.

SA A NO D SD

Cultural deprivation can be found in all parts of our country but tends to be concentrated in urban areas where one finds a wide range of social-class differentiation.

SA A NO D SD

With reference to social mobility, our cultural faith in our "golden opportunities" to climb socially seems unwarranted, as does the widespread belief that it is through education that upward mobility is acquired.

SA A NO D SD

Proper use of readiness for learning (for a deprived child) means that the teacher will rigidly eliminate material that the child cannot efficiently learn.

SA A NO D SD

Job training and retraining have produced as much as a 10 to 1 return -- no other compensatory program for the poor can approach this dollar return ratio.

SA A NO D SD

Society depends for its growth and progress on the willing effort of its people to make special contributions.

SA A NO D SD

Much of the lower-class child's alienation from the school reflects a cumulative deficit-- a too demanding curriculum with the resulting load of frustration, confusion, and impaired self-confidence.

SA A NO D SD

In a free society, no system can guarantee an exact matching between individual needs and educational options.

SA A NO D SD

To develop the desire to learn, educators must move away from the current use of interests, concerns and life-adjustment problems. If students found a more of a "learning in its own right" philosophy, apart from the practical benefits of education, such learning would occur.

SA A NO D SD

Community colleges promise to be effective instruments in overcoming racial inequality.

SA A NO D SD

Cumulative learning for the deprived child (making sure he/she can do lesson 4 before lesson 5, for example) helps insure continuing readiness to learn and greater success in learning.

SA A NO D SD

Career education is a rigid program from which no state, school district or adult training effort can deviate.

SA A NO D SD

Youth from the lower-class family seldom experiences the gratifying feeling of success and security so satisfying to his counterpart in the middle-class group.

SA A NO D SD

One big danger of teaching socially disadvantaged learners is that too often instructors expect limited accomplishment.

SA A NO D SD

OIC's/A's experience suggests that the best way to motivate a learner is to teach him something.

SA A NO D SD

The quality of instruction is the most important single component in programs for the poor.

SA A NO D SD

A social aspect of the mobility pattern bearing on the development of the child in the slum area is that of residential mobility, resulting in instability from changes in residence and familiar pattern.

SA A NO D SD

Intensive counseling, in OIC's/A's experience, can compensate for certain home and peer-group deficiencies in developing adequate motivation for higher academic and vocational achievement when coupled with student experiences in learning.

SA A NO D SD

The migration of people in masses has a disrupting impact on youth and his ability to learn within the larger mobility pattern.

SA A NO D SD

Each of the following statements is followed by a scale for you to mark. The scale and the meaning of each of the points is:

SA Strongly Agree
A Agree
NO No Opinion one way or the other
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SD Strongly Disagree.

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(SA) A NO D SD

Motivation is defined as the state of having an internal motive that incites the individual to some kind of action.

SA A NO D SD

The informal post-interview takes place after the interview and is not defined as part of the interview by the respondent.

SA A NO D SD

Counseling is the process in which a professionally trained person and his client relate the materials brought to light by the assessment process to the chores and decisions confronting the client in his formation of goals and life plans.

SA A NO D SD

Minority groups are usually excluded from full participation in the mainstream of the economic, political and social life of a country.

SA A NO D SD

The major determiner of the establishment of symbolic subgoals is that of living in a culture and in a family which itself pursues remote ends and helps the learner to identify his subgoals and to be gratified when he attains them.

SA A NO D SD

The major problem in recruitment is to motivate persons and to convince them that training will be effective and rewarding.

SA A NO D SD

The attitudes of the counselor will not prevent a good relationship from developing if he can recognize them in himself as naturally as he recognizes the attitudes clients are showing.

SA A NO D SD

Ethnic minority group members are accorded discriminatory treatment because of the differences in language, habits, and social tradition from that of the majority group.

SA A NO D SD

Uninterested dropouts come from subcultures where parental educational level is low.

SA A NO D SD

A chief function of the group counselor is to help the group establish a friendly atmosphere in which members can explore problems and relationships.

SA A NO D SD

In the future, group counseling will complement individual counseling.

SA A NO D SD

Counseling is the heart of the guidance program. It must be skillfully carried on if the gidance program is to succeed. No other part of the program can succeed unless there is competent counseling.

SA A NO D SD

Uninterested dropouts come from underprivileged lower socio-economic groups.

SA A NO D SD

Uninterested dropouts come from racial and national minorities who experience adverse discrimination.

SA A NO D SD

A child's freedom to explore his world is reinforced by varied opportunities to explore, presented in graduated doses of increasing complexity.

SA A NO D SD

Since most adolescents relate well to group interaction, the main thrust of counseling should be group counseling.

SA A NO D SD

The competent eclectic counselor is well acquainted with all the major theories and philosophies of counseling.

SA A NO D SD

Learning to be gratified by the feedback of information that one is successful or right is central to educational motivation.

SA A NO D SD

The primary goal of counseling is to help the counselee grow toward maturity.

SA A NO D SD

One advantage in using group counseling is to help adolescents recognize their unique and common problems.

SA A NO D SD

Afro-Americans, unlike many minorities who came to America, were not able to transplant their cultural traits or cluster with others who shared their language, religious affiliations or background.

SA A NO D SD

When beginning an interview for guidance purposes, acceptance is more fundamental in the beginning than understanding and must somehow be communicated first.

SA A NO D SD

Education has been an exercise in futility for minority Americans who must now be persuaded that things are changing.

SA A NO D SD

If a serious problem is present, individual counseling is a precondition for group guidance.

SA A NO D SD

A directive leader who is devoted to his/her work and genuinely concerned for the welfare of every member of the group can function as a group counselor.

SA A NO D SD

APPENDIX D

THE SEMANTIC DIFFERENTIAL CONCEPTS AND SCALES

WORKING WITH VOCATIONAL EDUCATION STUDENTS

bad	:	_____	_____	_____	_____	_____	_____	: good
negative	:	_____	_____	_____	_____	_____	_____	: positive
successful	:	_____	_____	_____	_____	_____	_____	: unsuccessful
dirty	:	_____	_____	_____	_____	_____	_____	: clean
interesting	:	_____	_____	_____	_____	_____	_____	: boring
unimportant	:	_____	_____	_____	_____	_____	_____	: important
reputable	:	_____	_____	_____	_____	_____	_____	: disreputable
meaningless	:	_____	_____	_____	_____	_____	_____	: meaningful
low	:	_____	_____	_____	_____	_____	_____	: high
pessimistic	:	_____	_____	_____	_____	_____	_____	: optimistic

MINORITY GROUP STUDENTS

good	: : : : : : :	bad
negative	: : : : : : :	positive
unsuccessful	: : : : : : :	successful
clean	: : : : : : :	dirty
boring	: : : : : : :	interesting
unimportant	: : : : : : :	important
disreputable	: : : : : : :	reputable
meaningful	: : : : : : :	meaningless
high	: : : : : : :	low
pessimistic	: : : : : : :	optimistic

OPPORTUNITIES FOR MINORITY GROUP STUDENTS IN SOCIETY

bad	:	:	:	:	:	:	:	: good
negative	:	:	:	:	:	:	:	: positive
successful	:	:	:	:	:	:	:	: unsuccessful
dirty	:	:	:	:	:	:	:	: clean
interesting	:	:	:	:	:	:	:	: boring
important	:	:	:	:	:	:	:	: unimportant
reputable	:	:	:	:	:	:	:	: disreputable
meaningful	:	:	:	:	:	:	:	: meaningless
high	:	:	:	:	:	:	:	: low
optimistic	:	:	:	:	:	:	:	: pessimistic

VOCATIONAL EDUCATION

good	:	:	:	:	:	:	:	bad
positive	:	:	:	:	:	:	:	negative
successful	:	:	:	:	:	:	:	unsuccessful
clean	:	:	:	:	:	:	:	dirty
interesting	:	:	:	:	:	:	:	boring
important	:	:	:	:	:	:	:	unimportant
reputable	:	:	:	:	:	:	:	disreputable
meaningful	:	:	:	:	:	:	:	meaningless
high	:	:	:	:	:	:	:	low
optimistic	:	:	:	:	:	:	:	pessimistic

APPENDIX E

THE CHANGE ORIENTATION INTRUMENT SUBSCALES

GLOSSARY OF TERMS

ADULT VOCATIONAL EDUCATION--

that part of education, often called continuing education, acquired after "formal" schooling is terminated

BEHAVIORAL OBJECTIVES--

often called performance objectives, this term refers to the learning outcomes which students should be able to demonstrate

COOPERATIVE EDUCATION--

a program involving the coordination of classroom instruction with students' experiences on-the-job

CORE VOCATIONAL CURRICULUM--

a plan of instruction in which all vocational students, regardless of vocational service area, take one or more vocational education courses designed to provide the "common" knowledge, attitudes, and skills needed by persons in any vocation

DIFFERENTIATED TEAM TEACHING--

a staffing arrangement incorporating several levels of professional preparation (e.g., teacher assistants, associate teachers, master teachers) where team members work together to utilize their special abilities to greatest advantage

DISADVANTAGED STUDENTS--

all students with socio-economic, mental or physical handicaps which influence their success in vocational education programs

INDIVIDUALIZED INSTRUCTION--

the adaptation of classroom instruction to the individual's needs and rate of learning

OCCUPATIONAL EDUCATION--

formal instruction about the "world of work" during elementary and junior high years

CHANGE ORIENTATION INSTRUMENT
(General Factor)

1. Schools can't do much to develop positive attitudes towards work.

2. Students can benefit little from occupational education in the elementary grades.

3. I think there's no harm in starting occupational preparation for young school children.

4. Early occupational education may stimulate a better attitude toward school work in later years.

5. Vocational teachers can make a real contribution to occupational education at the elementary level.

6. There is no need in the elementary curriculum for the addition of occupational education.

7. Individualized instruction using behavioral objectives is valuable in helping the student succeed.

8. I believe that it is more important to work with the entire class than to spend a lot of time with individuals.

9. I accept the idea that individualized instruction using behavioral objectives allows students to experience success more often.

10. I think the use of behavioral objectives with individualized learning would help students develop to their potential.

11. I argue that increased emphasis on adult vocational programs would eventually reduce inner-city unemployment.

12. Teaching teams allow a teacher to spend more time developing creativity, responsibility, and habits of inquiry in students.

13. Teachers should conduct classes without assistance and discourage others from helping.

14. I would greatly dislike being a member of a differentiated teaching team.

15. I uphold the differentiated team teaching concept as permitting a natural exchange of ideas.

16. I do not well enough with others to make differentiated team teaching work.

17. I'm convinced that differentiated team teaching is a waste of time.

18. Use of differentiated team teaching would allow a more varied content in lessons.

19. I say that differentiaited team teaching is asking too much of established teachers.

20. We now have more vocational programs than we need for the disadvantaged.

21. Vocational education can do little to alleviate the problems of disadvantaged people.

(Meeting the special needs of disadvantaged students)

1. Vocational education for disadvantaged students is a necessity if these students are to become useful citizens.

2. Vocational education is vital for job success of the disadvantaged.

3. Other available avenues for meeting the special needs of the disadvantaged are as good as vocational education.

4. The problems of disadvantaged students are too complex for vocational education to overcome.

5. I have no desire to teach disadvantaged vocational students.

6. Vocational education programs for the disadvantaged child are low on my priority list.

7. Vocational education can do much to improve the opportunities of disadvantaged children.

8. The vital job of providing vocational preparation for disadvantaged students is often overlooked by vocational teachers.

9. Special education programs in vocational education do little, if any good for the disadvantaged person.

10. Special programs of instruction in vocational education for the disadvantaged should be required of schools.

11. Vocational education for disadvantaged students could be successfully implemented in almost any school.

12. Considering the many problems facing education, meeting the vocational education needs of the disadvantaged is a moderate problem.

13. If we do not enact vocational education programs for the disadvantaged, it will cost us man times more in the future.

14. Of the disadvantaged students I encounter, most of them would benefit from a vocational education program.

15. Vocational education for the disadvantaged could work with the right kind of instructors.

16. Vocational education can do little to alleviate the problems of disadvantaged people.

17. I spend a lot of time making sure my courses meet the special needs of disadvantaged students.

18. It is not practical for vocational education to try to meet the special needs of disadvantaged students.

19. Vocational programs for the disadvantaged are doomed to failure.

20. For the dsiadvantaged student, vocational education is much more important than general or academic courses.

21. We must realize that a few disadvantaged students cannot be trained for a job.

22. Special vocational programs can do little to help a child from a low socioeconomic family until his home atmosphere is improved.

23. Students with various disadvantages are too difficult to teach.

24. Vocational education to enable a disadvantaged student to get a job may give him a sense of dignity.

25. Most disadvantaged students do not work hard enough to benefit from vocational programs.

26. Society imposes a moral obligation on us to provide vocational education to disadvantaged students.

27. I avoid teaching those who show little ambition and promise.

28. Vocational education can help disadvantaged students who consistently fail in other subjects.

29. We now have more vocational programs than we need for the disadvantaged.

APPENDIX F

TEACHER SCORING SHEET

Item	Response	Operation	CST1	CS2	CS3	COg	COs
1.		transform		---	---	---	---
2.		---	---		---	---	---
3.		lti 1.8	---	---	---		---
4.		multi 6.8	---	---	---	---	
5.		---		---	---	---	---
6.		transform	---		---	---	---
7.		multi 2.0	---	---	---		---
8.		multi 6.6	---	---	---	---	
9.		---		---	---	---	---
10.		---	---		---	---	---
11.		multi 4.5	---	---	---		---
12.		multi 2.8	---	---	---	---	
13.		transform		---	---	---	---
14.		---	---		---	---	---
15.		multi 5.3	---	---	---		---
16.		multi 1.4	---	---	---	---	
17.		--		---	---	---	---
18.		---	---		---	---	---
19.		multi 5.9	---	---	---		---
20.		multi 1.3	---	---	---	---	
21.		---		---	---	---	---
22.		transform	---		---	---	---
23.		multi 1.3	---	---	---		---
24.		multi 1.8	---	---	---	---	
25.		transform		---	---	---	---
26.		---	---		---	---	---
27.		multi 6.1	---	---	---		---
28.		multi 6.0	---	---	---	---	
transform 1=6,2=5, 3=4,4=3,5=2,6=1		TOTAL FOR PAGE ONE					

Item	Response	Operation	CST1	CS2	CS3	COg	COs
29.		---		---	---	---	---
30.		---	---		---	---	---
31.		multi 1.8	---	---	---		---
32.		multi 4.7	---	---	---	---	
33.		---		---	---	---	---
34.		---	---		---	---	---
35.		multi 5.7	---	---	---		---
36.		multi 1.3	---	---	---	---	
37.		multi 2.0	---	---	---	*	*
38.		transform	---		---	---	---
39.		multi 6.5	---	---	---		---
40.		multi 6.5	---	---	---	---	
41.		---	---	---		---	---
42.		---	---		---	---	---
43.		multi 6.0	---	---	---		---
44.		multi 6.0	---	---	---	---	
45.		multi 1.5	---	---	---	*	*
46.		---	---		---	---	---
47.		multi 6.1	---	---	---		---
48.		multi 3.1	---	---	---	---	
49.		multi 6.2	---	---	---	---	
50.		---	---	---		---	---
51.		multi 1.9	---	---	---		---
52.		multi 5.7	---	---	---	---	
53.		multi 5.2	---	---	---	---	
54.		---	---	---		---	---
55.		multi 1.3	---	---	---		---
56.		multi 5.7	---	---	---	---	
transform 1=6,2=5, 3=4,4=3,5=2,6=1		TOTAL FOR PAGE TWO					

Item	Response	Operation	CST1	CS2	CS3	COg	COs
57.		multi 6.1	---	---	---	---	
58.		---	---	---		---	---
59.		multi 5.6	---	---	---		---
60.		multi 1.7	---	---	---	---	
61.		multi 1.1	---	---	---	---	
62.		---	---	---		---	---
63.		multi 2.1	---	---	---		---
64.		multi 6.3	---	---	---	---	
65.		multi 3.5	---	---	---	---	
66.		---	---	---		---	---
67.		multi 1.2	---	---	---		---
68.		multi 2.4	---	---	---	---	
69.		multi 1.6	---	---	---	---	
70.		---	---	---		---	---
71.		multi 5.9	---	---	---		---
72.		multi 5.9	---	---	---	---	
73.		multi 2.1	---	---	---	---	
74.		---	---	---		---	---
75.		multi 2.2	---	---	---		---
76.		multi 5.8	---	---	---	---	
77.		multi 1.9	---	---	---	---	
78.		---	---	---		---	---
	TOTAL THIS PAGE (page three)						
	TOTAL FROM PAGE ONE						
	TOTAL FROM PAGE TWO						
	GRAND TOTAL FOR EACH SCALE						

TOTAL SCORE FOR CONTENT SCALES (CS) [ ]

(CST1 + CS2 + CS3)

transform 1=6, 2=5, 3=4, 4=3, 5=2, 6=1

APPENDIX G

SEMANTIC DIFFERENTIAL TRANSFORMATION SHEET

Semantic Differential Transformation Sheet

WORKING WITH VOCATIONAL EDUCATION STUDENTS

	1	2	3	4	5	6	7	
Bad	:	:	:	:	:	:	:	Good
Negative	:	:	:	:	:	:	:	Positive
Unsuccessful	:	:	:	:	:	:	:	Successful
Dirty	:	:	:	:	:	:	:	Clean
Boring	:	:	:	:	:	:	:	Interesting
Unimportant	:	:	:	:	:	:	:	Important
Disreputable	:	:	:	:	:	:	:	Reputable
Meaningless	:	:	:	:	:	:	:	Meaningful
Low	:	:	:	:	:	:	:	High
Pessimistic	:	:	:	:	:	:	:	Optimistic

Semantic Differential Transformation Sheet

MINORITY GROUP STUDENTS

	1	2	3	4	5	6	7	
Bad	:	:	:	:	:	:	:	Good
Negative	:	:	:	:	:	:	:	Positive
Unsuccessful	:	:	:	:	:	:	:	Successful
Dirty	:	:	:	:	:	:	:	Clean
Boring	:	:	:	:	:	:	:	Interesting
Unimportant	:	:	:	:	:	:	:	Important
Disreputable	:	:	:	:	:	:	:	Reputable
Meaningless	:	:	:	:	:	:	:	Meaningful
Low	:	:	:	:	:	:	:	High
Pessimistic	:	:	:	:	:	:	:	Optimistic

Semantic Differential Transformation Sheet

OPPORTUNITIES FOR MINORITY GROUP STUDENTS IN SOCIETY

	1	2	3	4	5	6	7	
Bad	:	:	:	:	:	:	:	Good
Negative	:	:	:	:	:	:	:	Positive
Unsuccessful	:	:	:	:	:	:	:	Successful
Dirty	:	:	:	:	:	:	:	Clean
Boring	:	:	:	:	:	:	:	Interesting
Unimportant	:	:	:	:	:	:	:	Important
Disreputable	:	:	:	:	:	:	:	Reputable
Meaningless	:	:	:	:	:	:	:	Meaningful
Low	:	:	:	:	:	:	:	High
Pessimistic	:	:	:	:	:	:	:	Optimistic

Semantic Differential Transformation Sheet

VOCATIONAL EDUCATION

	1	2	3	4	5	6	7	
Bad	:	:	:	:	:	:	:	Good
Negative	:	:	:	:	:	:	:	Positive
Unsuccessful	:	:	:	:	:	:	:	Successful
Dirty	:	:	:	:	:	:	:	Clean
Boring	:	:	:	:	:	:	:	Interesting
Unimportant	:	:	:	:	:	:	:	Important
Disreputable	:	:	:	:	:	:	:	Reputable
Meaningless	:	:	:	:	:	:	:	Meaningful
Low	:	:	:	:	:	:	:	High
Pessimistic	:	:	:	:	:	:	:	Optimistic